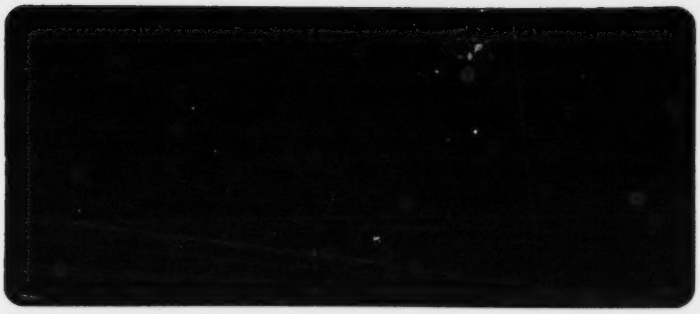
# BISON CONTROL AREA PROGRAM
# ANNUAL REPORT OFSURVEY ACTIVITIES
# DECEMBER 2005 – APRIL 2006

Northwest Territories Environment and Natural Resources



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## ABSTRACT

Bovine tuberculosis (*Mycobacterium bovis*) and brucellosis (*Brucella abortus*) are endemic in bison (*Bison bison*) herds in and around Wood Buffalo National Park, and the adjacent Slave River Lowlands. In 1987, the Bison Control Area (BCA), and a surveillance program, was created to minimise the risk of disease transmission to the disease-free Mackenzie and Nahanni/Liard herds in the Northwest Territories. During the 2005-2006 surveillance season, we used a Cessna 172 or Cessna 337, to fly 11 weekly shoreline patrols along the northern boundary of the BCA, from December 24, 2005 to April 5, 2006. An additional verification patrol was flown April 11, 2006 to investigate two unrelated track sightings, however deteriorating snow conditions and visibility made any definite confirmation impossible. The BCA Technician was present during this final flight. Total survey time during shoreline patrols was 22.8 hours. We used a Cessna 206 to fly one semi-comprehensive aerial survey of BCA zone I from 7 - 9 of February 2006; total survey time was 14.0 hours. From 21 - 31 March 2006, we used a Cessna 206 and a Cessna 180 to fly the annual comprehensive survey of BCA zones I and II; total survey time was 35.8 hours. In total, we flew 88.2 hours including ferry time to systematically survey the BCA during the 2005– 2006 surveillance season and did not observe any bison (or their sign, i.e., fresh tracks or feeding craters) within the BCA during our surveillance flights.

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# INTRODUCTION

Free-ranging bison (*Bison bison)* in and around Wood Buffalo National Park (WBNP) and the Slave River Lowlands (SRL) are infected with bovine tuberculosis and brucellosis (Tessaro *et al.* 1990, Joly and Messier 2001, Figure1). These northern bison herds contracted the two cattle diseases when 6,673 diseased plains bison were trans located from the National Buffalo Park at Wainright, Alberta to WBNP between 1925 and 1928 (Fuller 2002). Risk of infection to healthy free-ranging bison as well as commercial cattle and bison herds has been a chronic management problem ever since (see Connelly *et al.* 1990, APFHRAN 1999, RAC 2001). Recent results from Jolly and Messier (2004) showed that bison within WBNP have overall apparent prevalence rates of 49% and 31% for tuberculosis and brucellosis respectively. These results suggest that the diseases will continue to persist in the affected bison in and around WBNP and reinforces the need to mitigate the risk of infecting the Mackenzie Wood Bison herd (Tessaro *et al.* 1993, Nishi 2002), the presumed disease free status of the Hay-Zama herd located in northwest Alberta, and the Nahanni-Liard herd located near the Mackenzie Mountains (Gates *et al.* 1992a, Figure 1). The diseased bison in and around WBNP also present the most important limiting factor to the reestablishment of other healthy free-roaming herds in the region that could contribute to the resource-based economies of surrounding communities (Gates *et al.* 2001b).

In March 1996, because of ongoing concerns of the commercial bison industry, the Canadian Bison Association requested the Animal, Plant and Food

Health Risk Assessment Network (APFRAN), Canadian Food Inspection Agency, conduct a formal risk assessment. The objective was to determine the risk of infection with tuberculosis and brucellosis from bison in WBNP and surrounding area during a 12 month period, for each of three "at risk" groups: commercial cattle, commercial captive bison and disease-free, free-ranging bison. In January 1999, APFRAN completed the risk assessment and concluded that disease-free, free-ranging bison had the highest probability of becoming infected with bovine brucellosis and/or tuberculosis (APFRAN 1999).

Due to the APFRAN, (1999) disease risk assessment was not based on terrain and habitat variability, a follow-up research project was initiated to compile local knowledge on bison movement and distribution around WBNP, define the relative influences of biophysical and management factors, and to integrate quantitative and local qualitative data on biophysical factors into a bison movement model (Gates et *al.* 2001a, Mitchell 2002). The research focused on bison movements and distribution in the region in order to provide a model and maps for informing the development of disease risk management measures and to update the APFRAN risk model. Main results suggested that the highest likelihood for bison dispersal occurred in corridors that were parallel to the Peace River in the area of Fort Vermillion, and with the broadest network of corridors between High Level and WBNP.

Additional results from Gates and Wierzchowski's (2003) movement corridor analysis indicate that potential movements of bison between WBNP and the Mackenzie Bison Range are most likely to occur in the northern section of

surveillance Zone I in the BCA. Gates and Wierzchowski (2003) recommended that in addition to the in-situ surveillance of BCA Zone I, aerial surveillance of the area between Buffalo Lake and Highway #5 should be conducted to ensure that the disease-free Mackenzie herd do not come into contact with infected bison that may occupy this area. Due to the propensity of bison to use meadows near lakes and rivers, they also suggested that aerial reconnaissance of the north western shore of Buffalo Lake might be worthwhile.

Continuation of shoreline and surveillance surveys is critically important for early detection of bison in the control area, due to the ongoing risk of disease transmission from WBNP bison to the Mackenzie and Nahanni bison herds,

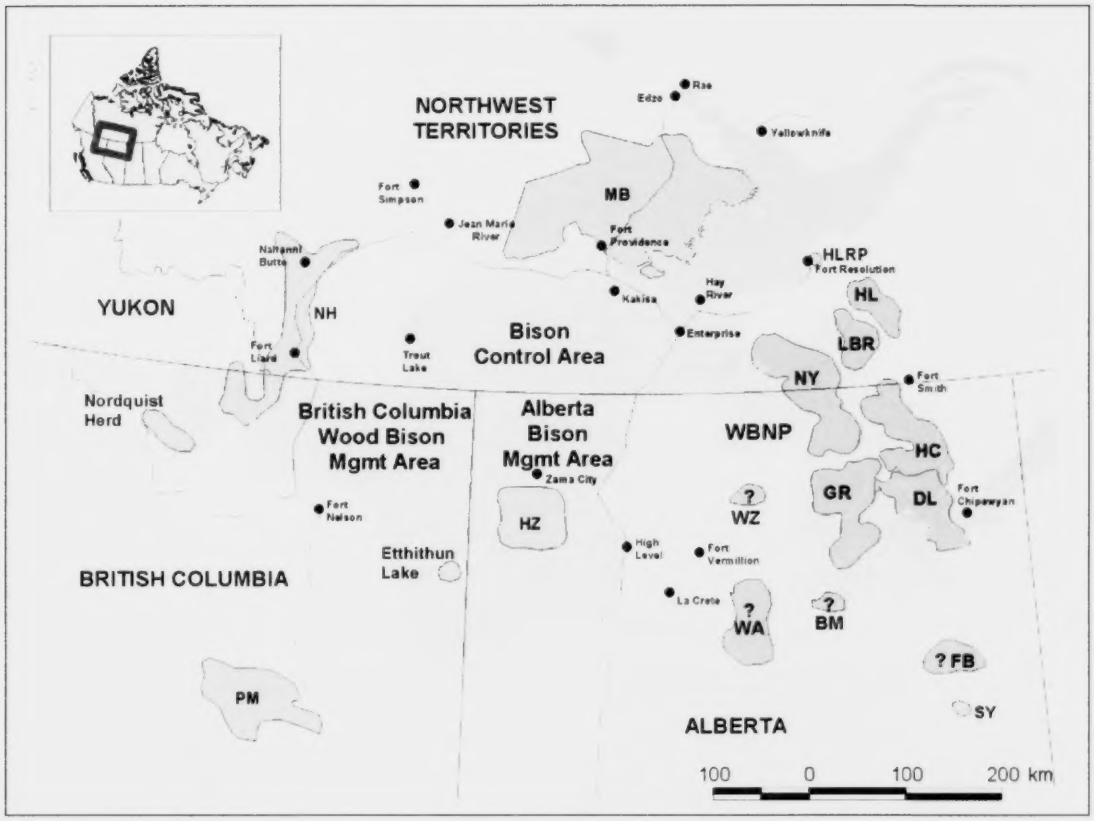
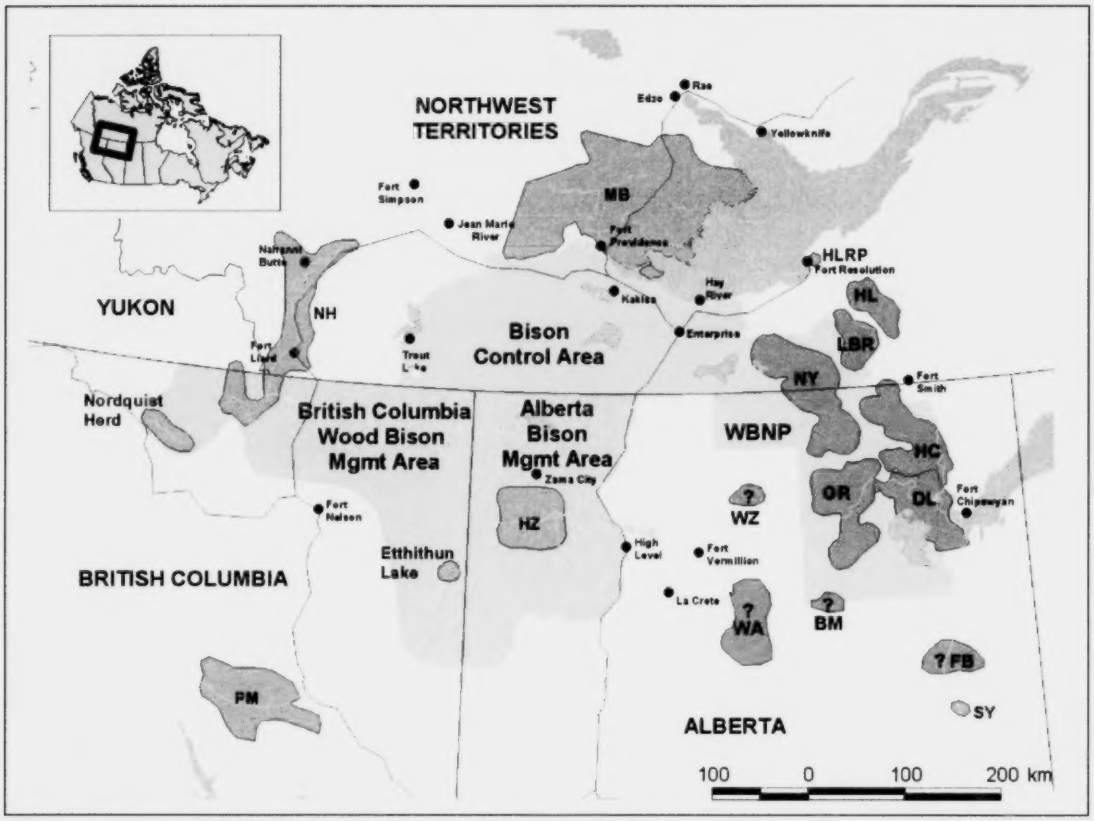



**Figure 1**. Distribution of bison herds in Northern Canada.

Note: Bison herds considered to be infected with bovine tuberculosis and brucellosis are shown in light orange; HL = Hook Lake, LBR = Little Buffalo River, NY = Nyarling, HC=Hay Camp, GR=Garden River, DL=Peace-Athabasca Delta, FB=Fire Bag, WZ=Wentzel, WA=Wabasca, BM=Birch Mountain. Bison herds considered to be disease-free are shown in light green; MB = Mackenzie, NH = Nahanni, PM= Pink Mountain, HZ = Hay Zama, SY = Syncrude/Fort McKay. The delineation of home ranges originated from various research (Reynolds & Hawley 1987, Joly & Messier 2001, Harper et.al 2000, Wood Buffalo National Park, Resources, Wildlife and Economic Development, British Columbia Ministry of Environment, and Alberta Environment.)

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**The Bison Control Area Program**

In 1987, the government of the Northwest Territories (GNWT) implemented a program to reduce the risk of contact between infected and disease-free bison (Gates and Gray 1992; Gates *et al* 1992b). The program involved defining an area - The Bison Control Area (BCA) – from which bison are excluded through surveillance and active management. The BCA originally included lands south of the Mackenzie River and North of the Mackenzie Highway between Mills Lake (near Fort Providence) and Hay River. In 1990, the BCA was expanded to encompass the area between the Alberta-NWT border and southern shoreline of the Mackenzie River; the western boundary was delineated by Trout River; the eastern boundary was outlined by the Buffalo River and western boundary of WBNP (Figure 2). Presently, the BCA encompasses 3, 936, 339 ha.

Since 1993, the Government of the Northwest Territories (Department of Environment and Natural Resources) and the Government of Canada (Parks Canada) have jointly funded the Bison Control Area Program (BCAP). Cost of surveying the BCA is jointly funded under a Memorandum of Understanding between the two agencies. This report summarizes the results of the Bison Control Area Program for the 2005/2006-surveillance season. (i.e. December 2005 - April 2006).

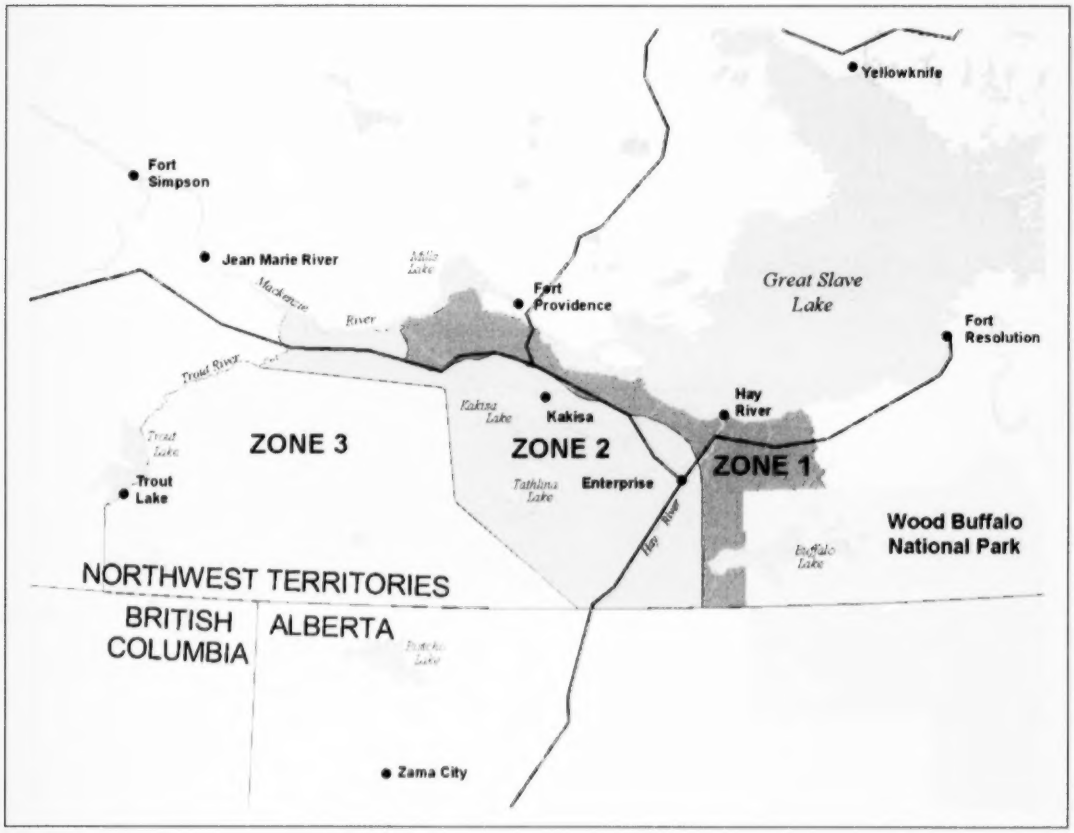
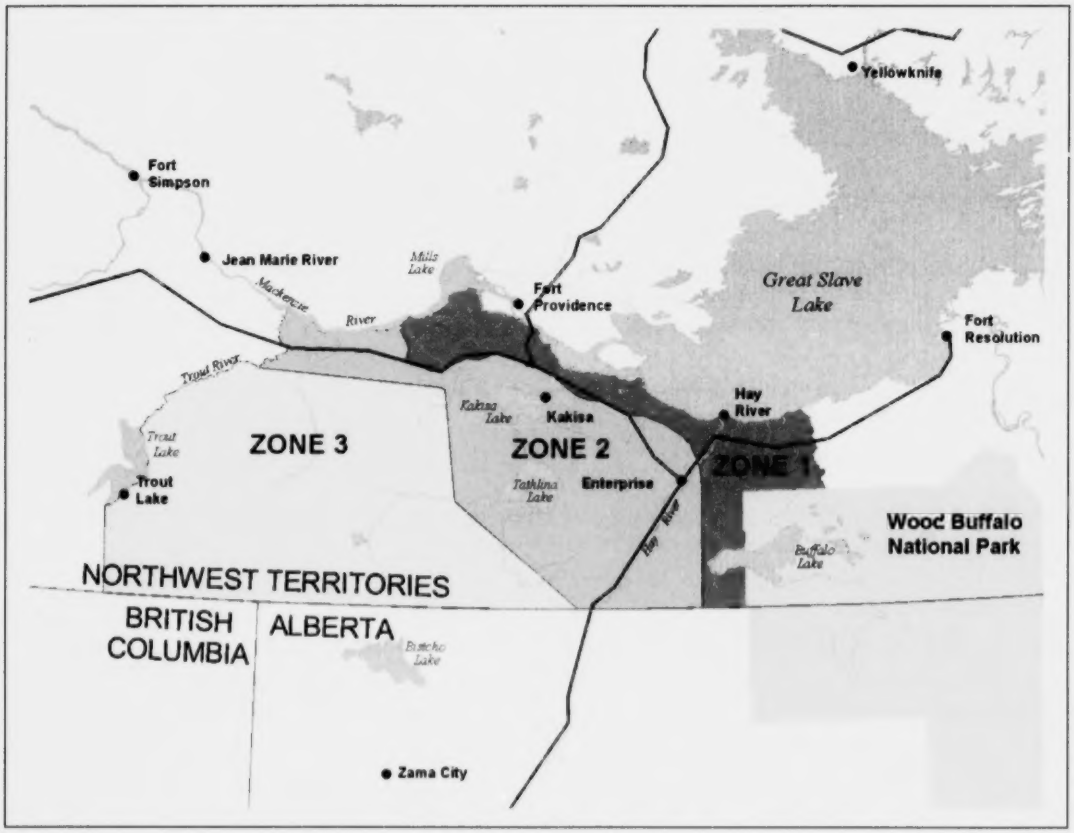



**Figure 2.** The Northwest Territories Bison Control Area showing the three surveillance zones.

## Goals and Objectives

The goal of the Bison Control Area Program in the Northwest Territories is to reduce the risk of infection of the Mackenzie and Nahanni herds with tuberculosis and brucellosis. Our overall approach to achieve this goal, is to conduct systematic aerial surveys combined with an extensive public communication program.

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The objectives of the Bison Control Area Program are to:

- Detect and remove any bison in the BCA, and to prevent establishment of bison herds or individuals in this area[1];

- Continue surveillance of the bison control area; and

- Increase public awareness of the Bison Control Program.

[1] Wood bison (Bison bison athabascae) are considered a threatened subspecies of North American Bison by the committee on the Status of Endangered wildlife in Canada (COSEWIC); they are listed on Appendix II by the Convention on the International Trade In Endangered species (CITES). Because of the disease risk, any bison found in the BCA are considered nuisance wildlife under section 61 of the NWT Wildlife Regulations Act (Government of the Northwest Territories 1992). This regulation states that NWT residents may shoot any bison sighted in the BCA.

## METHODS

To assure repeatability and comparability of search effort and resulting wildlife observations, we used the same survey methodology had been used on previous BCA surveys. (Gates and Gray 1992, Gates *et al.* 1992, Williamson *et al.* 1995, Antoniak and Gates 1996, Bohnet and Gates 1997, Boulanger *et al.* 1998, Tanguay, *et al.* in prep, Potvin *et al.* in prep., Jewell *et al.* in prep., Campbell *et al.* in prep).

The Bison Control Area is stratified into three discrete zones (Figure 2). Active surveillance through aerial observation is conducted during winter months when bison and bison sign are most discernible (i.e., tracks and/or feeding craters) and visibility is optimal. Survey effort and frequency of monitoring is allocated according to the presumed likelihood of bison moving into the area (see APFRAN 1999). Consequently, this survey design requires frequent (weekly) surveys of the shoreline areas that are closest to the range of Mackenzie Bison Herd and the range of bison in WBNP. Less frequent surveys (semi-comprehensive and annual comprehensive) are used to survey larger areas (BCA Zones I and II) in the BCA.

We flew three different types of aerial surveys to systematically survey the BCA throughout the surveillance season. The first type of survey was a weekly shoreline patrol of the high-risk area (Zone I). We continued to fly a standard shoreline patrol route as recommended by Tanguay *et al.* after the 1999-2000 season (Tanguay *et al.* in prep) (Figure 3). This survey was conducted at approximately seven-day intervals and had a planned flight time of about two hours per patrol flight.

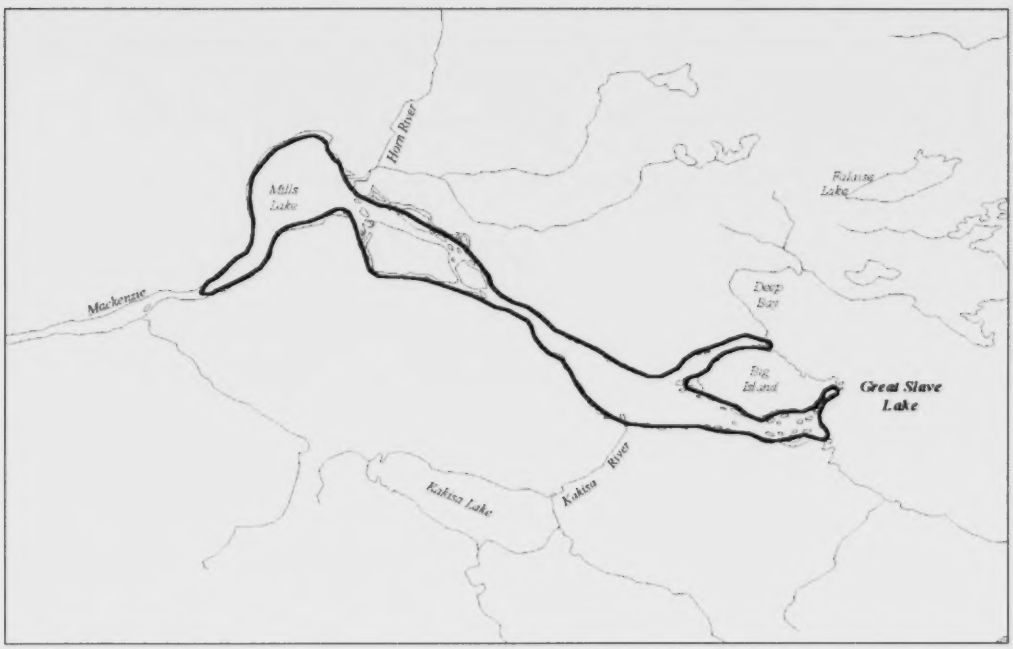


**Figure 3.** Standardized shoreline patrol route for the Bison Control Area.

The second type of survey was a one-time semi-comprehensive surveillance flight of Zone I. This survey was performed in February 2006 covers a larger area taking about 15 hours to complete. The final survey type was the annual comprehensive surveillance flight of Zones I and II. We completed this

survey in late March and allocated 35 hours of flight time to it. No aerial surveys were conduced in Zone III of the BCA.

Shoreline patrols were flown in either a Cessna 172 or Cessna 337, with a local community observer and pilot. Both the semi-comprehensive survey and the comprehensive survey flights were performed with a Cessna 206 and with a Cessna 180 for back up. The survey crew for the surveillance flights of Zone I and the annual comprehensive survey of Zones I and II consisted of a pilot, the BCA Technician and two community observers. The technician sat in the front seat while the observers occupied the left and right rear seats of the aircraft. Survey aircraft were flown at approximately 250 to 300 metres above ground level at a speed averaging 190 km/hr. A verification flight was conducted with a pilot, Resource Officer (Antoine) and the BCA Technician in a Cessna 337.

We adapted flight paths from previous surveys to plan our routing for aerial surveys for this season. However, routes used in previous years, for both the semi-comprehensive and comprehensive surveys were updated and restructured in order to put emphasis on areas of probable importance as identified by local observers and past BCA reports. As suggested last year, we extended survey lines into the northwest corner of WBNP, in addition to concentrating more coverage in higher risk areas (see Figure 5.1 and 6.1). Utilising predetermined flight routes ensures maximum coverage for both surveillance surveys, and allows the BCA Technician to pre-plan fuel stops and breaks, which increases survey efficacy and improves safety. Pre-planned routes were used as a guide, and were followed for the bulk of the survey, only deviating from them to

investigate animal tracks or other abnormal activities. (i.e. wolf-kills) The result would ensure consistency and some accuracy in the area covered. This also allowed us to survey Zones I & II with the greatest possible coverage given available flying hours.

To improve sampling quality and precision during surveillance surveys, we employed a known strip (transect) width of 500 m and positioned stripped markers on the struts of the aircraft to define the boundaries of the strip within which the observers count animals. With the aid of observers, the BCA technician affixed markers prior to flights using a known calculation w = (W/H)*h. Once this exercise was complete, a test flight was carried out to ensure marker placement accuracy. The test flight entailed positioning the aircraft along side a known 500-metre length on the ground, at survey altitude, and confirming whether the fixed marker positions aligned with the known ground length. Implementing a known strip (transect) width enables us to accurately calculate percent cover.

Wildlife observations during weekly shoreline patrols were most often recorded on a NTS 1:250,000-reproduction map of the survey area. This was recorded on an Excel spreadsheet and then transferred into a Database IV file format for export into Arc View 3.2a Geographic Information System (Environmental Systems Research Institute, 1992-2000). An OziExplorer Mapping program (Des Newman, version: 3.95.4) was used to plot the route grid for the survey routes, this was uploaded into a hand-held Garmin GPS, GPS map 76S and was used by the pilot for navigation and to maintain adherence to the planned routes. (Initially a Trimble Navigation, Transpak II was used but it

became too cumbersome with old technology being difficult to program etc. and was later abandoned.) The survey routes plotted in OziExplorer were verified and then entered into ASPEN Global Positioning System Field Software (Trimble Survey and Mapping Products, 1998). All observations of large mammals (*i.e.*, moose, caribou, and wolves) during both surveillance surveys were recorded using ASPEN GPS Field Software. These data were prepared for export to ArcView 3.2a with Pathfinder Office Software (Trimble Survey and Mapping Products, 1998).

# RESULTS

Our aerial surveys were generally conducted during optimum snow and light conditions. However, some flights were conducted in less suitable conditions in order to maintain adequate and regular surveillance (Appendix A).

**Shoreline Patrols**

Weekly shoreline patrols were initiated on December 24, 2006 and continued until 5 April 2005. (Figures 4.1 - 4.11) Total flight time for the 11-shoreline patrols flown was 38.4 hours[2] (Table.1) with a mean duration of 3.5 (± 0.25 Standard Deviation) hours. On 5 April 2005 the last scheduled shoreline patrol flight was flown. Shortly after this period the BCA Technician received two reports of tracks sited in the vicinity of Point Des Roche west of Hay River. As the first report of tracks was more than seven weeks old by the time it was reported to the E & NR officer in charge in Hay River (Hordal), it was followed up by a telephone investigation only and no confirmation could be made. The second report was made April 10 by one of our own officers (Antoine) who on 9 April followed tracks, which appeared to have crossed from Slave Point. The BCA Technician accompanied by the officer, after being held up by weather, flew to the area in question. This area had previously received substantial effects from sun and rain, followed by fresh snowfall making the tracks indistinguishable and as a result of this, the search was given up. During this flight the BCA Tech observed that snow cover on land had receded substantially altering snow

[2] Total flight time for shoreline patrols includes ferry time.

structure, due to warmer temperatures in March, so that existing tracks were near impossible to discern from the air. Resulting discussion with the Resource Officer in Providence indicated one more attempt should be made to do a shoreline patrol in that area as the ice was still firm for animals to cross, however inclement weather continued to hamper this creating further melting conditions. It was determined that ice conditions in these areas would likely continue to degrade and deter bison from crossing. In respect of these observed conditions, we made the decision to discontinue shoreline patrol surveys for the 2005/2006 season, Thursday April 18, 2006.

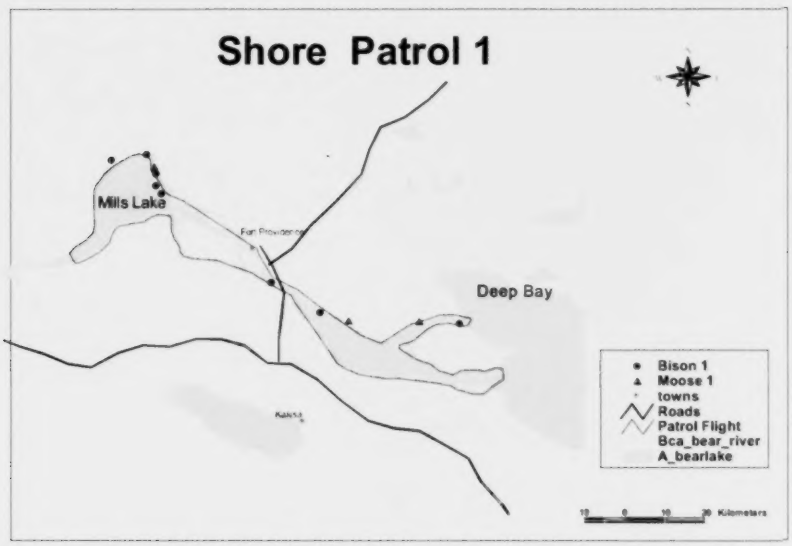


**Figure 4.1.** Shoreline Patrol completed December 24th. 2 hours and 12 minutes flown on the survey.

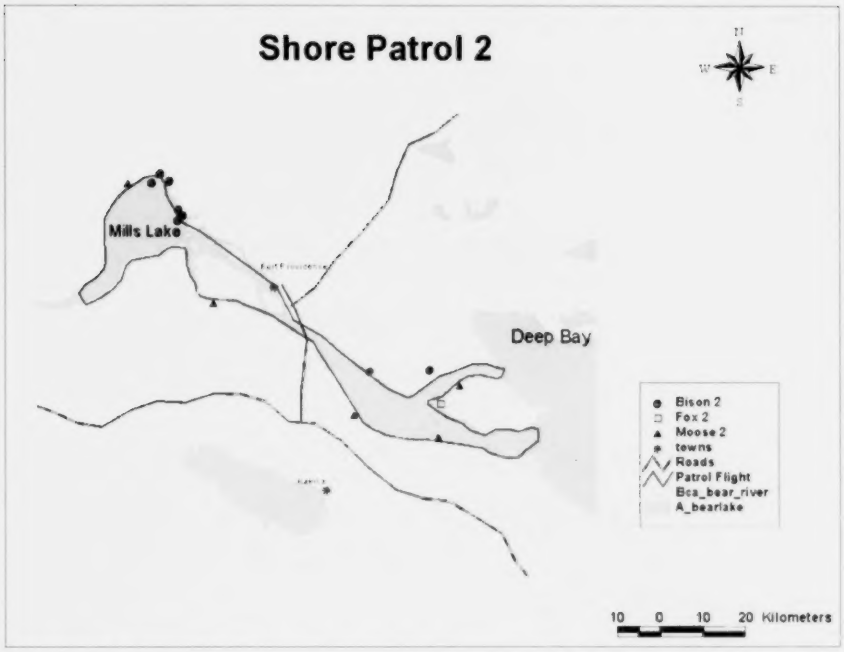


**Figure 4.2.** Shoreline Patrol completed January 5th with a total of 2 hours and 36 minutes flown on the survey.

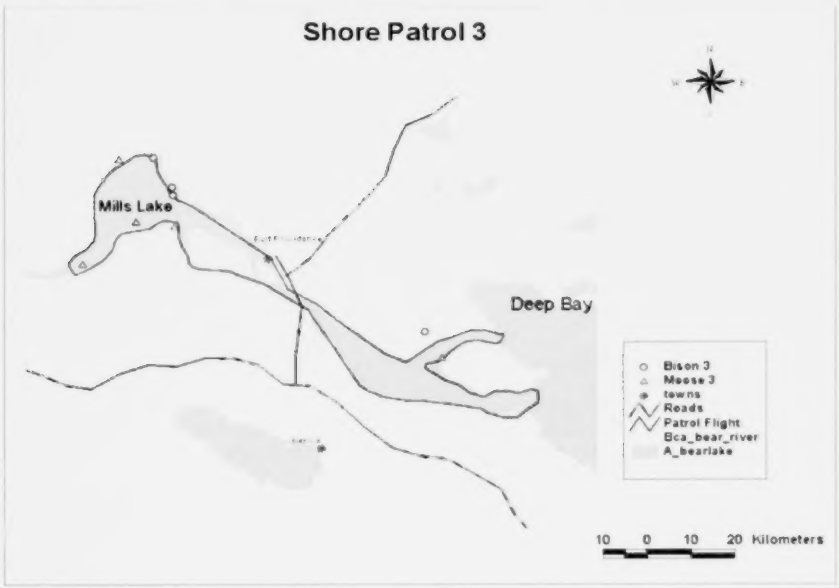


**Figure 4.3.** Shoreline Patrol completed January 13th. Survey flight time was 1 hour.

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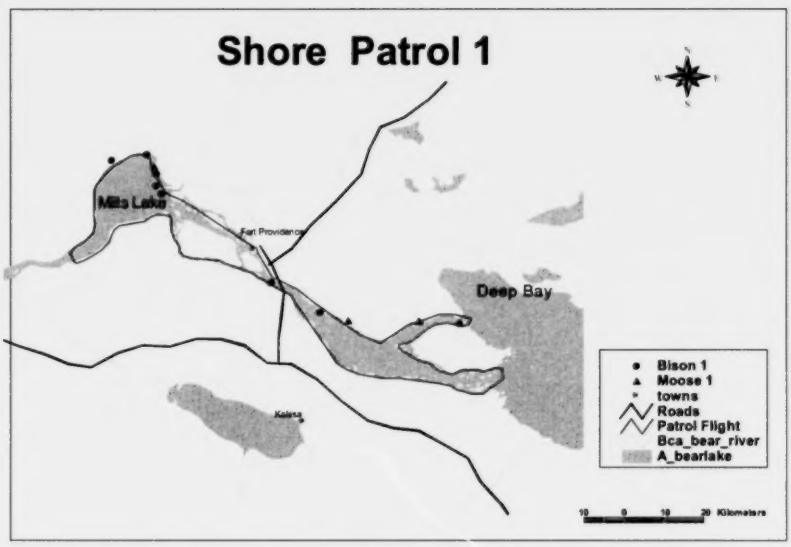


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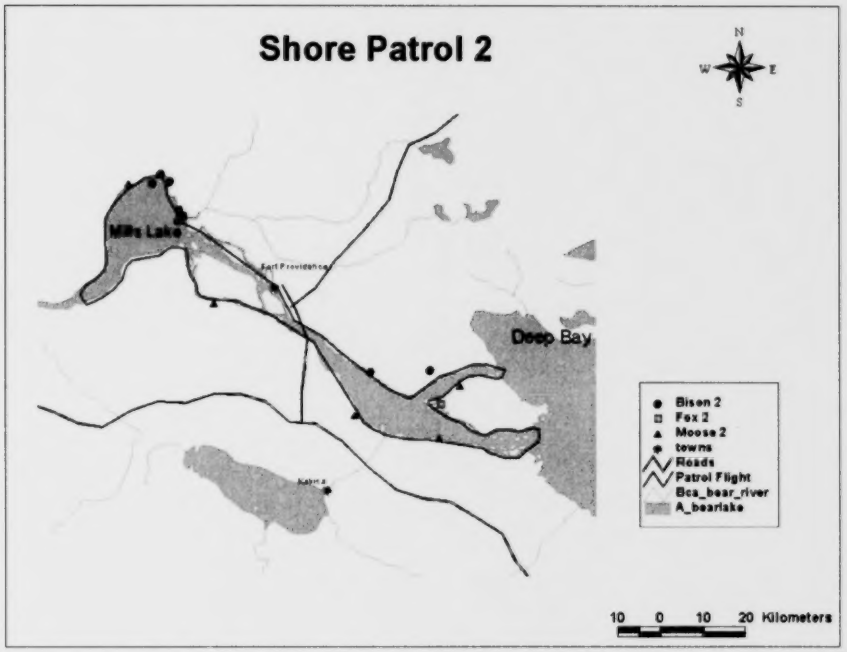


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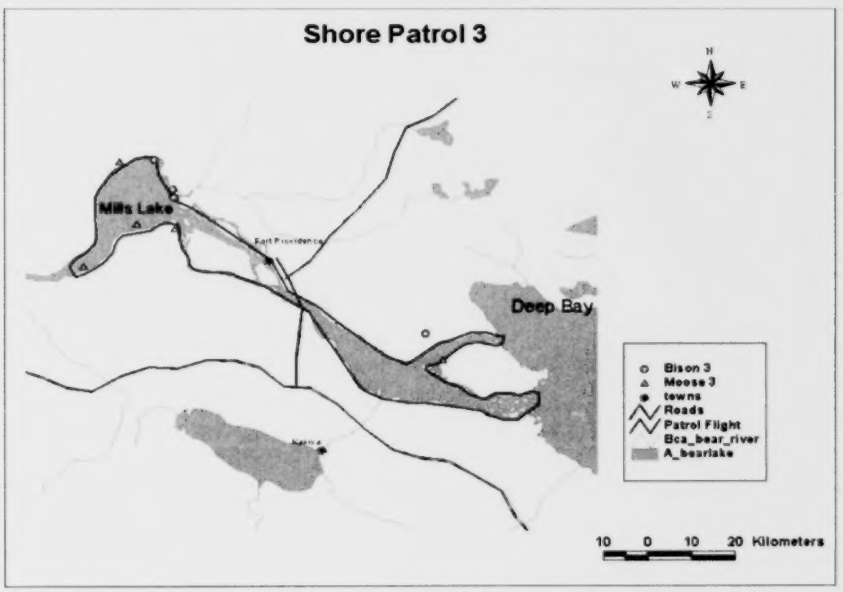



**Figure 4.3.** Shoreline Patrol completed January 13th. Survey flight time was 1 hour.

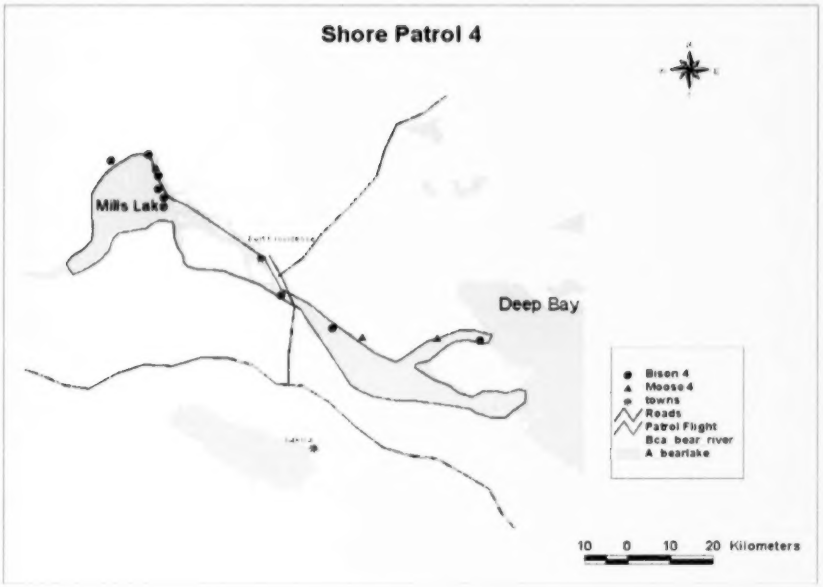



**Figure 4.4.** Shoreline Patrol completed January 18th. Total survey flight time 2 hours and 18 minutes.

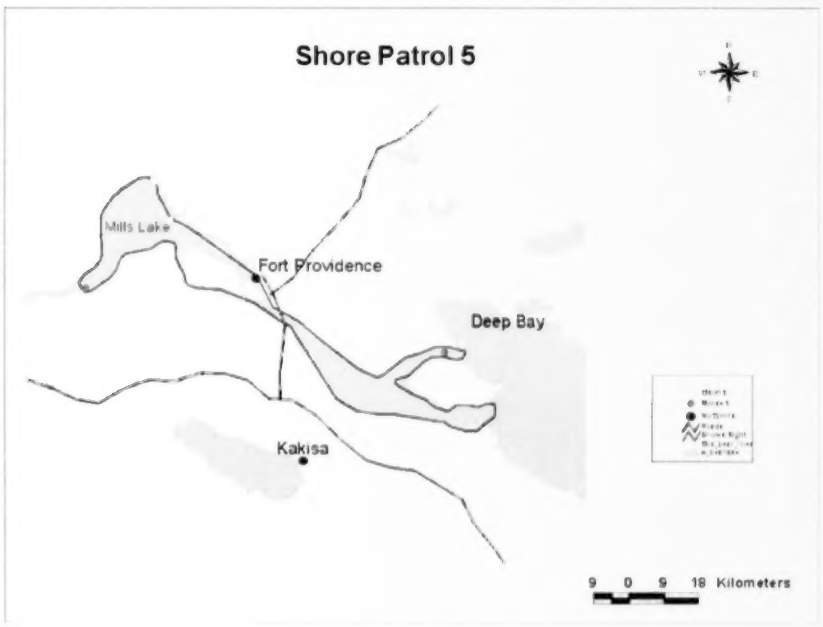



**Figure 4.5.** Shoreline Patrol completed January 26th. A total of 1 hour and 12 minutes were flown on the survey.

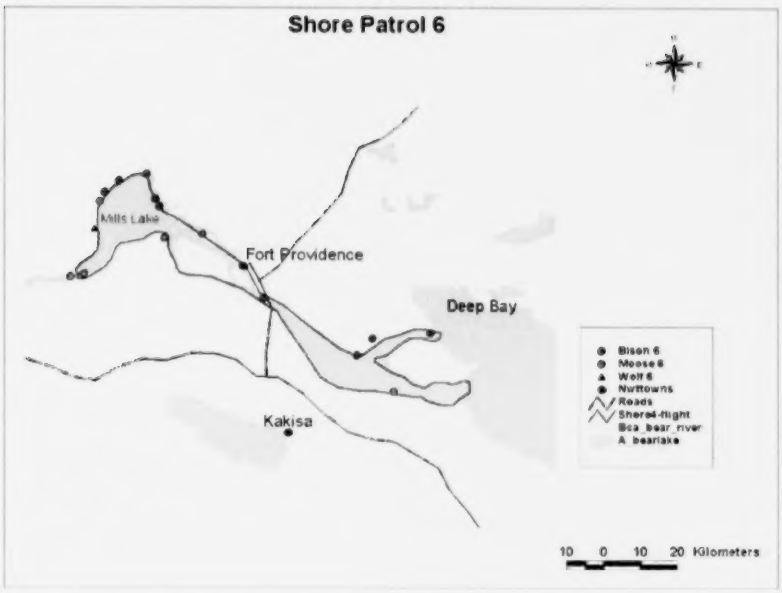



**Figure 4.6.** Shoreline Patrol, February 1st. 2 hours and 24 minutes flown on the survey.

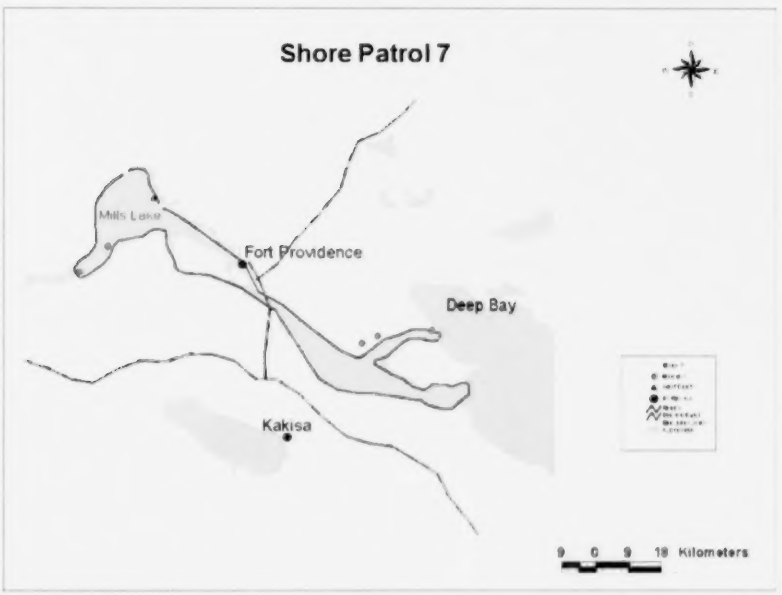
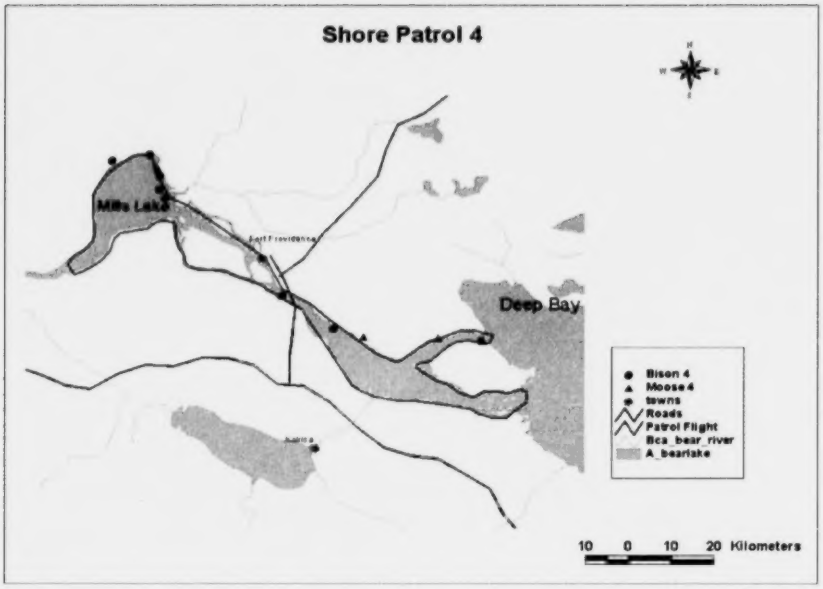



**Figure 4.7.** Shoreline patrol completed February 16, 2006, totaling 1 hour 50 minutes.

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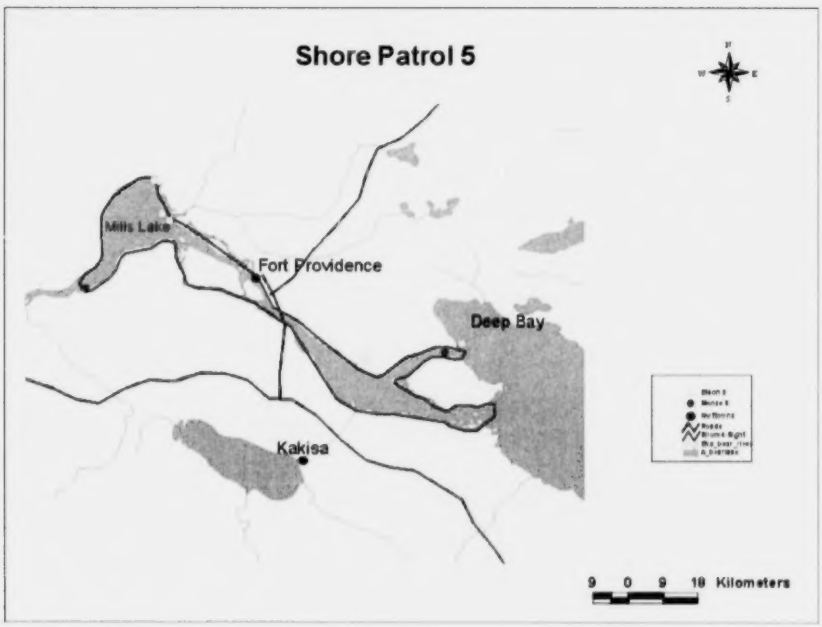



**Figure 4.5.** Shoreline Patrol completed January 26th. A total of 1 hour and 12 minutes were flown on the survey.

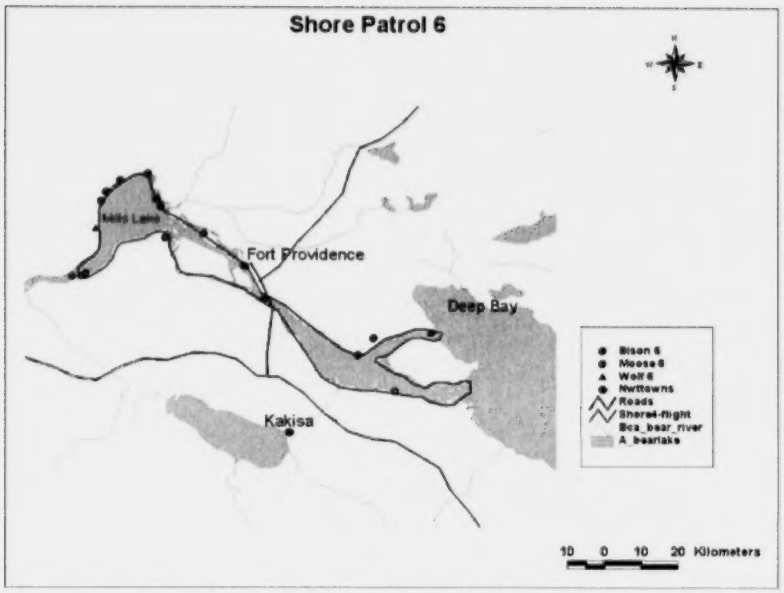



**Figure 4.6.** Shoreline Patrol, February 1st. 2 hours and 24 minutes flown on the survey.

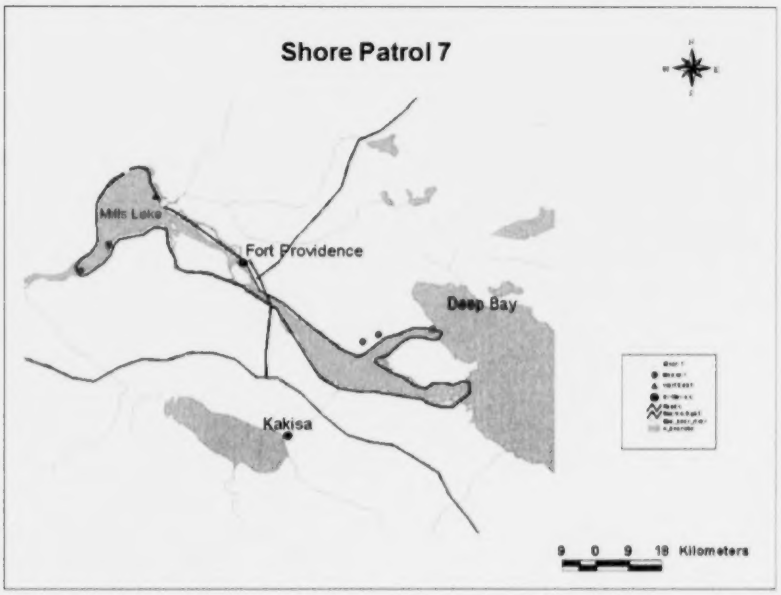



**Figure 4.7.** Shoreline patrol completed February 16, 2006, totaling 1 hour 50 minutes.

**Figure 4.8.** Shoreline patrol completed February 22, 2006; total survey time 2 hours and 10 minutes.

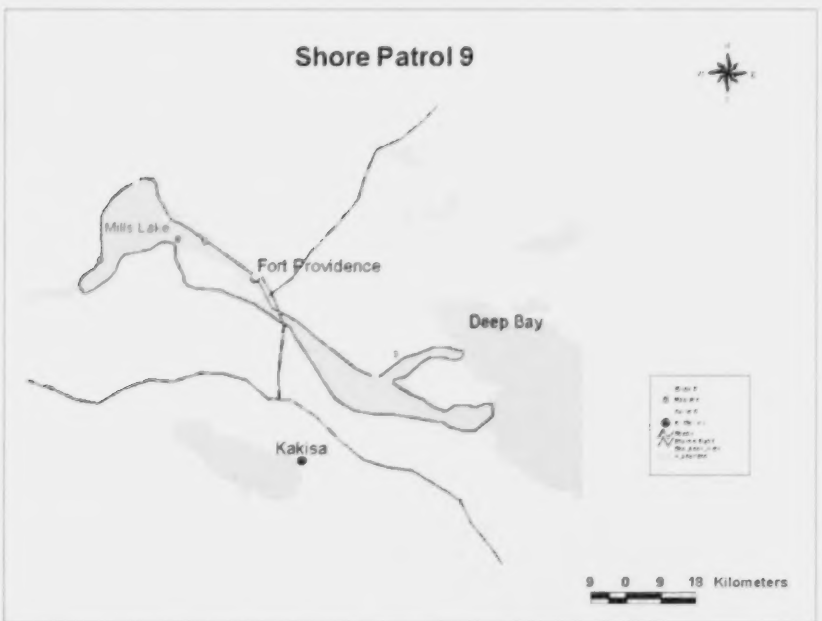



**Figure 4.9.** March 1st shoreline patrol completed with duration of 1 hour 55 minutes of survey time.

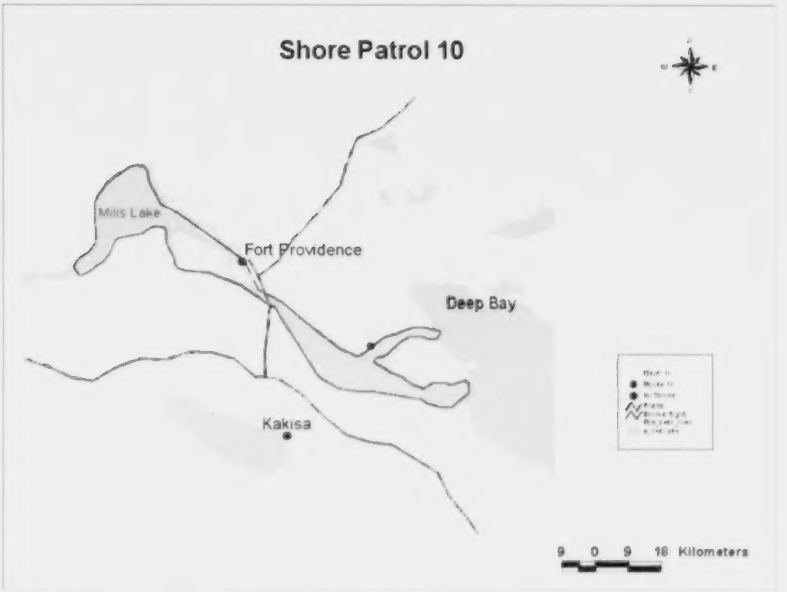



**Figure 4.10.** Completed shoreline survey for March 8, 2006 with duration of 2 hours and 55 minutes survey time.

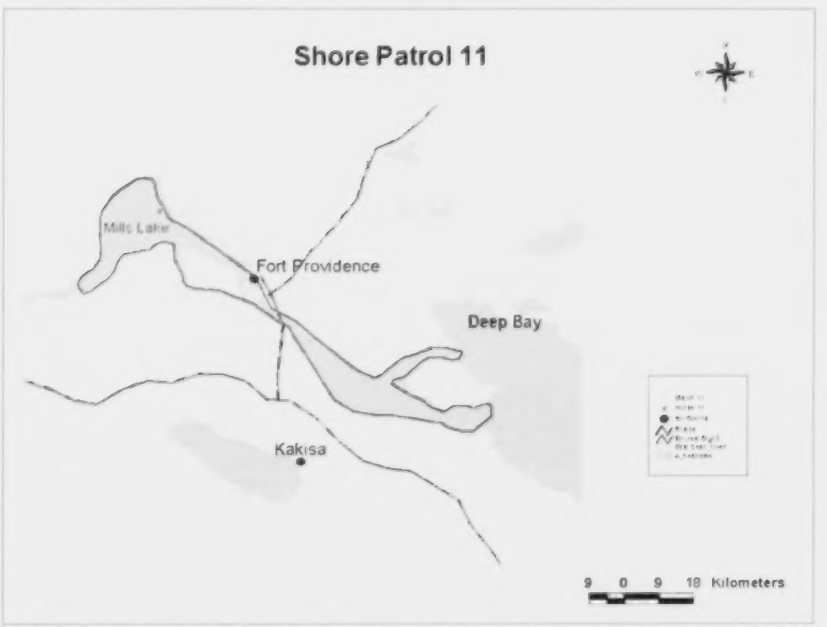



**Figure 4.11.** Shoreline patrol completed April 5, 2006 with a total survey time 1 hour and 25 minutes.

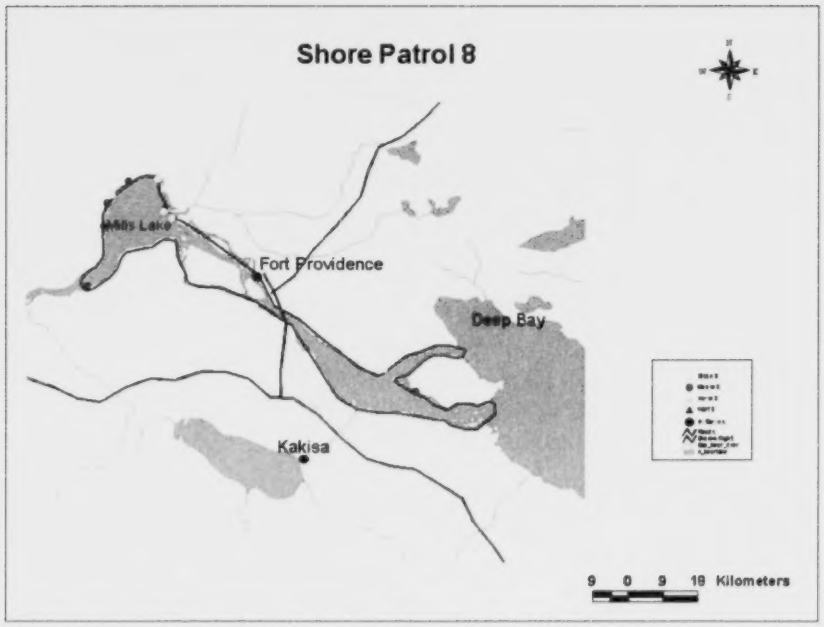
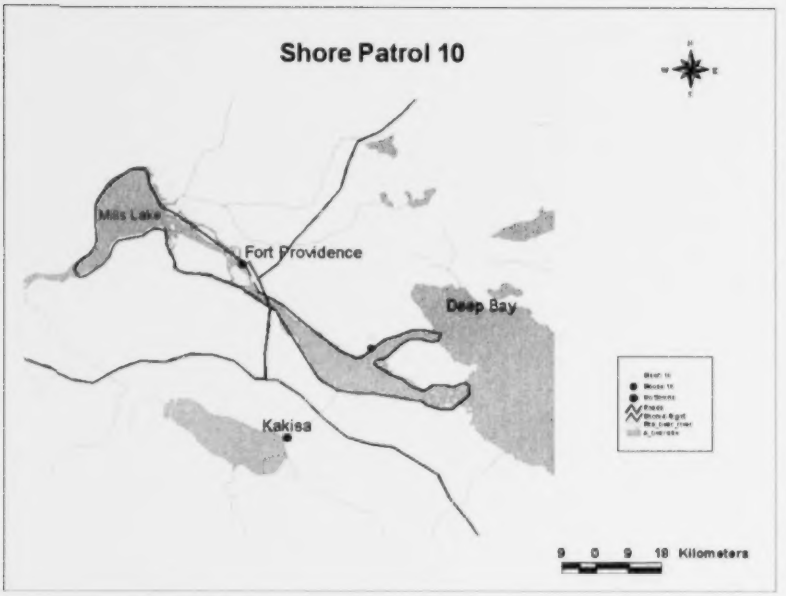



**Figure 4.8.** Shoreline patrol completed February 22, 2006; total survey time 2 hours and 10 minutes.

**Figure 4.9.** March 1st shoreline patrol completed with duration of 1 hour 55 minutes of survey time.

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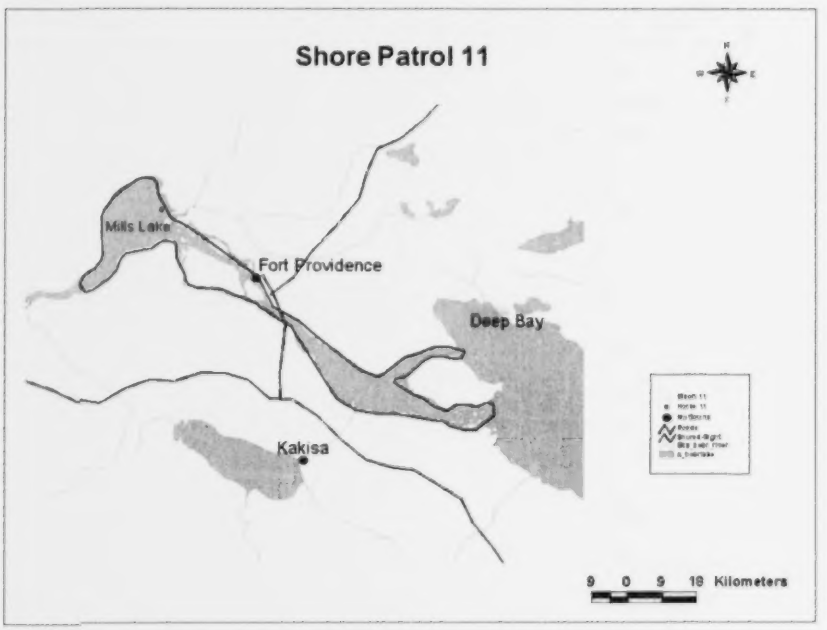


**Figure 4.11.** Shoreline patrol completed April 5, 2006 with a total survey time 1 hour and 25 minutes.

**Table 1.** Summary of shoreline patrols in the Bison Control Area from December 2005 to April 2006[3].

| Date | Ferry Hrs | Survey Hrs | Date | Ferry Hrs | Survey Hrs |
|---|---|---|---|---|---|
| 24-Dec-2005 | 1.5 hrs | 2.4 hrs | 16-Feb-2006 | 1.3 hrs | 1.8 hrs |
| 05-Jan-2006 | 1.5 hrs | 2.4 hrs | 22-Feb-2006 | 1.4 hrs | 2.2 hrs |
| 13-Jan-2006 | 1.5 hrs | 1.9 hrs | 01-Mar-2006 | 1.4 hrs | 1.9 hrs |
| 18-Jan-2006 | 1.5 hrs | 2.3 hrs | 08-Mar-2006 | 1.5 hrs | 2.9 hrs |
| 26-Jan-2006 | 1.7 hrs | 1.2 hrs | 05-April-2006 | 0.8 hrs | 1.4 hrs |
| 01-Feb-2006 | 1.5 hrs | 2.4 hrs | | | |
| | | Total ferry hours **15.6** | | Total survey hours: **22.8** | |

**Surveillance Surveys**

We conducted one semi-comprehensive surveillance flight of BCA Zone I this season. This survey was conducted from February 7 – 9, 2006 (see Figures 5.1, 5.2, 5.3 and 5.4). The total time flown on the semi-comprehensive survey was 14.0 hours. The annual comprehensive surveillance flight of BCA Zones I and II was conducted from March 21- 31 2006 (Figures 6.1, 6.2, 6.3 and 6.4), and required 35.8 hours to complete (Table 2). The March comprehensive was halted twice during that period, once on Wednesday March 22, due to poor lighting conditions and again for four days due to poor weather, March 25 and then resumed again March 29, 2006. In total, we spent 88.2 hours surveying the BCA in the 2005-2006 surveillance season (Appendix B).

**Table 2.** Summary of Surveillance flights in the Bison Control Area from February to March 2006. A Cessna-206 and a Cessna 180 aircraft were used to complete both surveillance surveys.

| Date | BCA Zone | Hours Flown |
|---|---|---|
| 6-09 Feb.2005 | I (Semi-Comprehensive) | 14.0 |
| 21-31 Mar.2005 | I & II (Comprehensive) | 35.8 |
| | Total Hours: | **49.8** |

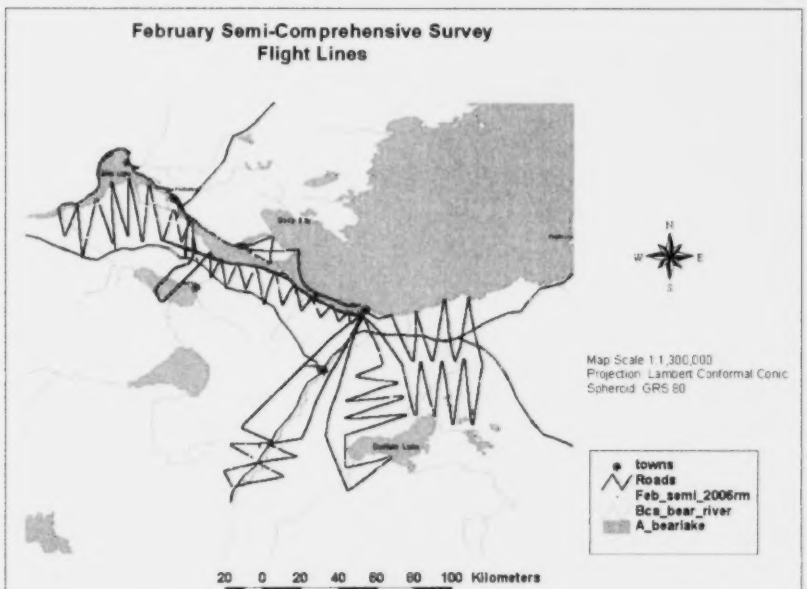


**Figure 5.1.** Flight lines of Semi-Comprehensive survey flown February 7th to 9th 2006. in the BCA, Zones 1 and 2.

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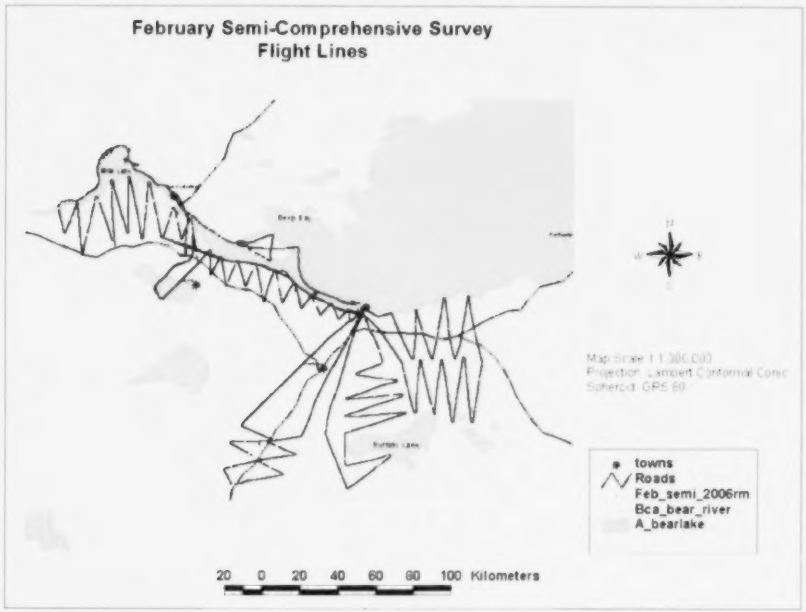


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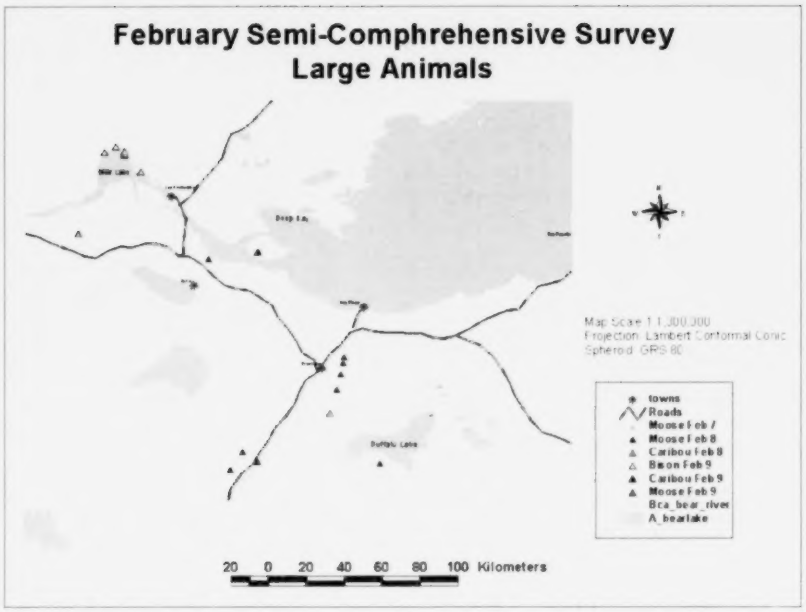



**Figure 5.2.** Large Animals observed during the February 6 to 9 Semi – Comprehensive Survey of the Bison Control area, Zones I and II.

**February Semi Showing Large Mammal tracks and the Survey Grid**

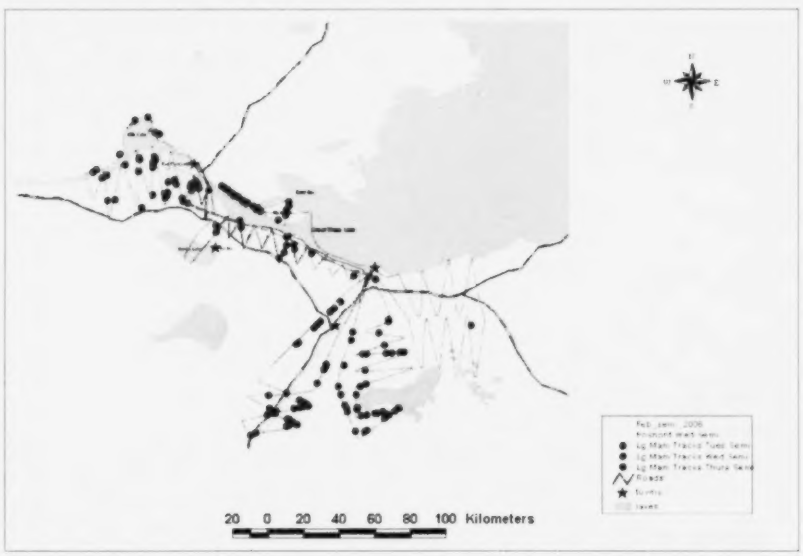



**Figure 5:3.** Flight Lines and large Mammal tracks located during the Semi-Comprehensive Survey of the BCA, February 7 – 9, 2006.

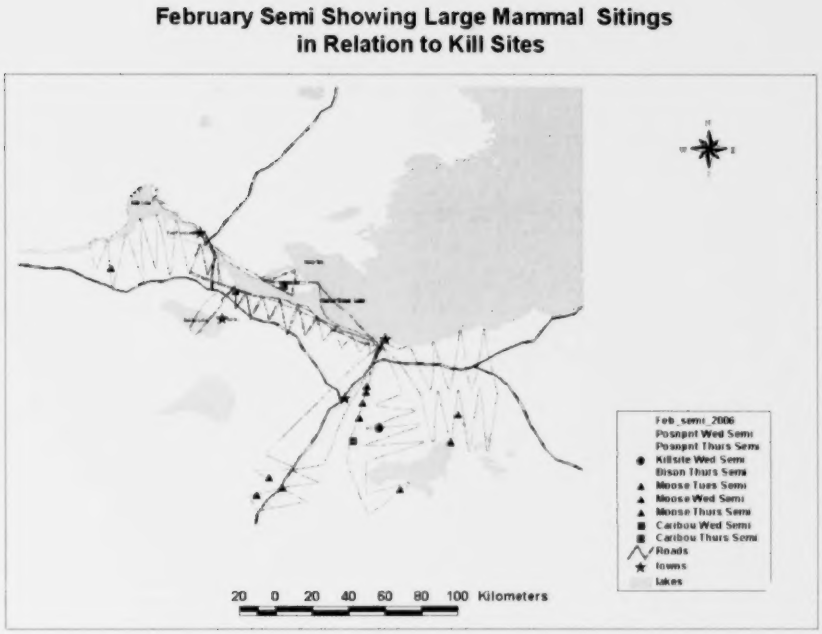
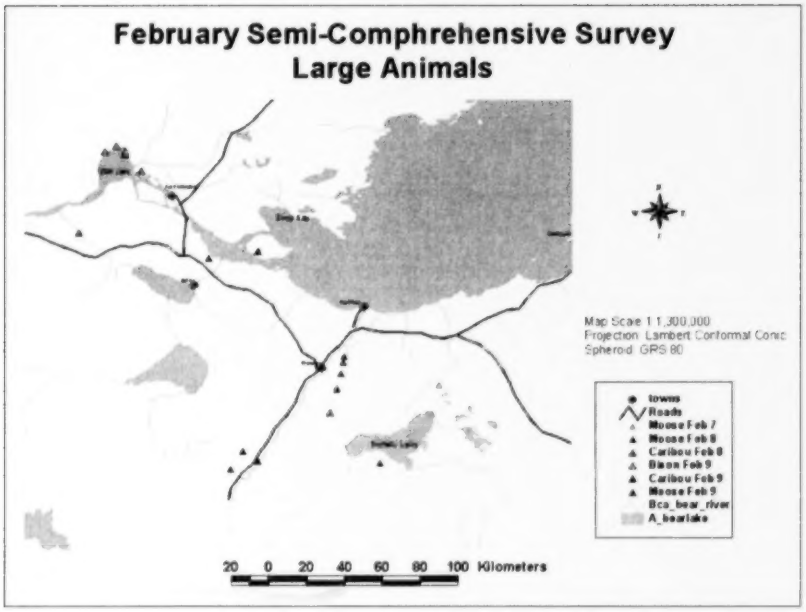



**Figure 5.4.** Flight Lines and large Mammal sightings shown in relation to Wolf-kills found during the Semi Comprehensive of the BCA, February 7 – 9 2006.

**Wildlife Observations**

Although bison have been observed in the BCA in the past, we did not observe any bison, nor did we receive any reports of bison sightings in the BCA during the 2005-2006 surveillance season. During surveillance flights we did not observe any attempts by bison (*i.e.* fresh tracks) to cross the Mackenzie River. All bison observed during shoreline patrols or surveillance flights were located on the north side of the Mackenzie River in the Mackenzie Bison Sanctuary (MBS). The cumulative totals of large mammals observed during shoreline patrols and surveillance flights were 3144 bison, 38 caribou, 174 moose, and 17 wolves (Table 3).

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**February Semi Showing Large Mammal tracks and the Survey Grid**

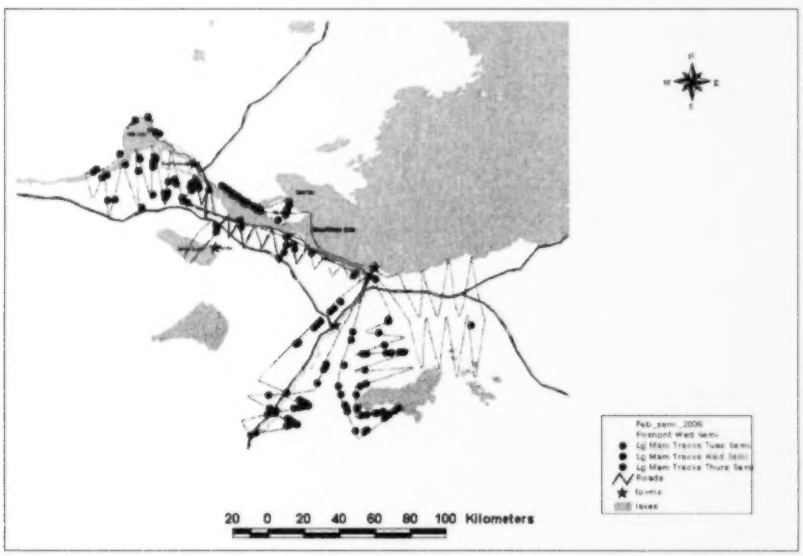
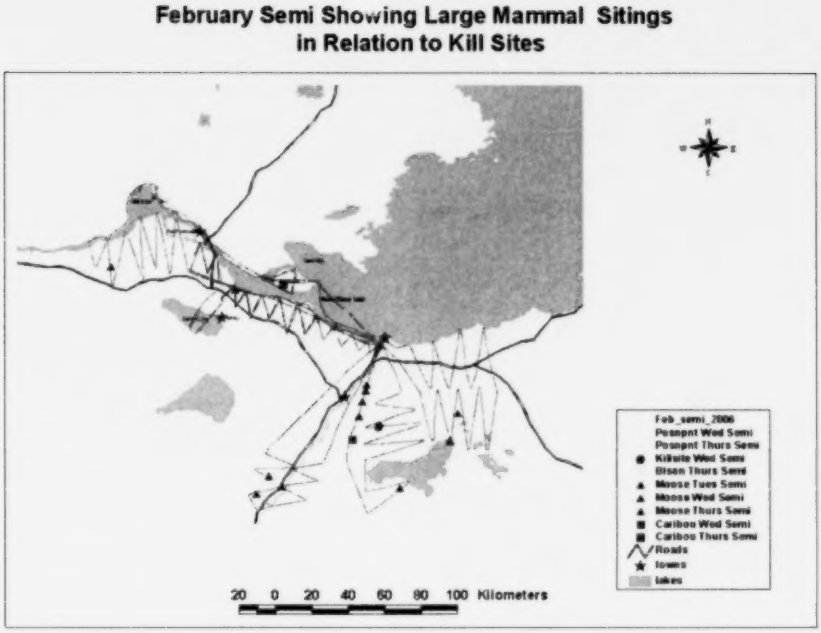



**Figure 5:3.** Flight Lines and large Mammal tracks located during the Semi-Comprehensive Survey of the BCA, February 7 – 9, 2006.

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Bison were most often observed along the north shore of Mills Lake and on the North Shore of the Mackenzie River near Big Island. (figures: 4.1- 4.11, Figure 5.2, 54 and Figure 6.2). During shoreline patrols moose were generally observed along the north shore of the Mackenzie River around Mills Lake, and around Big Island. On surveillance surveys moose were observed along both sides of the Hay River near the settlement of Enterprise and by the NWT/ Alberta border. Moose were also observed in the Buffalo Lake area and north of the Cameron hills near Tathalina Lake. (Figures: 4.1-4.11, 5.2, 5.4 and 6.2). No caribou were observed during shoreline patrols. During surveillance surveys most caribou were observed north of Buffalo Lake and on Big Island as well as the base of the Cameron Hills. During the March Comprehensive survey a group of Caribou was observed on Great Slave Lake across from the mouth of McNalley Creek surrounded by wolves. (Figures: 5.2, 6.2 and 6.4). Wolves were observed during shoreline patrols this season in the vicinity of Mills Lake. (Figures: 4.6, 4.7 and 4.8). Wolves were also seen north of the Buffalo lake area following Caribou and along the Mackenzie Highway near Kakisa Lake. (Figure 6.4)

Based on the concentrations of large mammal tracks most of the ungulate activity during February appeared to be south of Mills Lake and between Buffalo Lake and the Cameron Hills. In March, concentrations of large animals appeared to be heaviest between the Mackenzie River, the Mackenzie Highway, Big Island and Axe Point, as well as North of the Cameron Hills between Kakisa and Tathalina Lakes. (Figures 5.3 and 6.3)

**Table 3.** Recorded sightings of large mammals observed during all surveillance flights in the Bison Control Area from December 2005 to April 2006.

| Species | Surveillance Flights | | | |
|---|---|---|---|---|
| | Shoreline Patrols (n=12) | Semi-Comprehensive (n=1) | Comprehensive (n=1) | Totals |
| Bison | 2493 | 283 | 368 | 3144 |
| Caribou | 0 | 18 | 20 | 38 |
| Moose | 97 | 45 | 32 | 174 |
| Wolf | 7 | 10 | 0 | 17 |

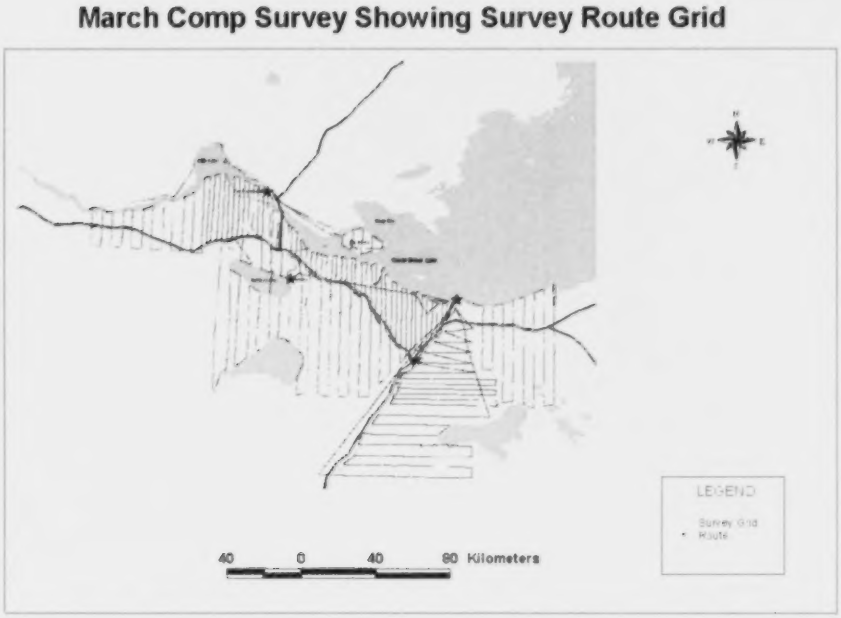



**Figure 6.1.** Flight lines flown during the March comprehensive survey, March 21 – 31 of BCA Zones I & II.

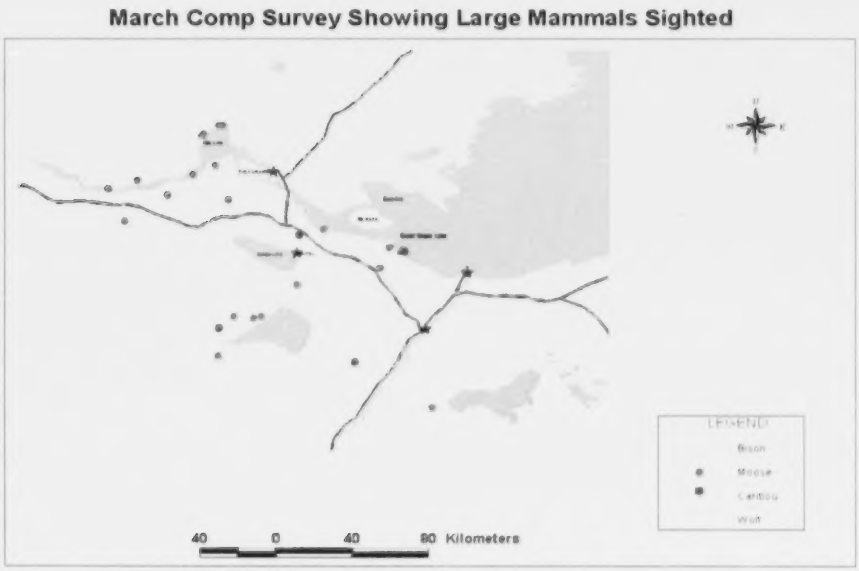



**Figure 6.2.** Large mammals observed during the March 21 – 31, 2006. Comprehensive survey of the Bison Control Area, Zones I & II.

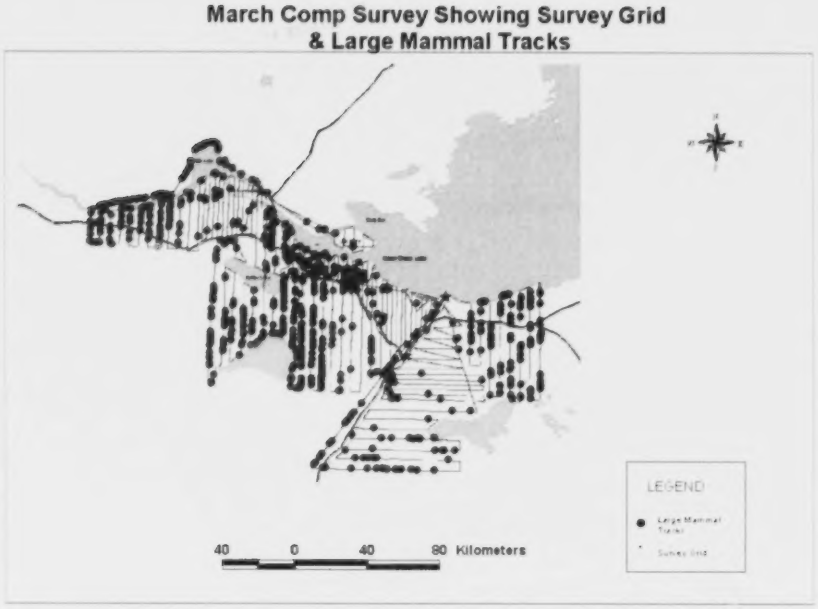



**Figure 6.3.** Flight lines and large mammal tracks recorded during the March Comprehensive Survey of BCA Zones I and II, March 21 – 31, 2006.

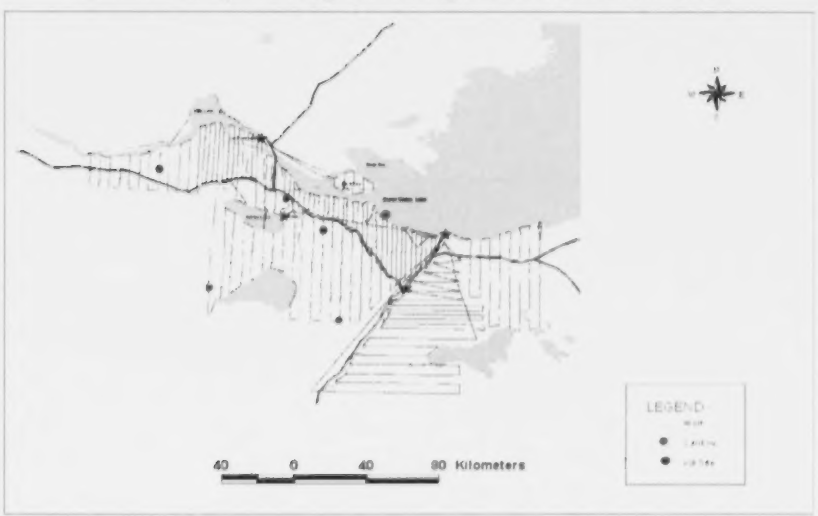
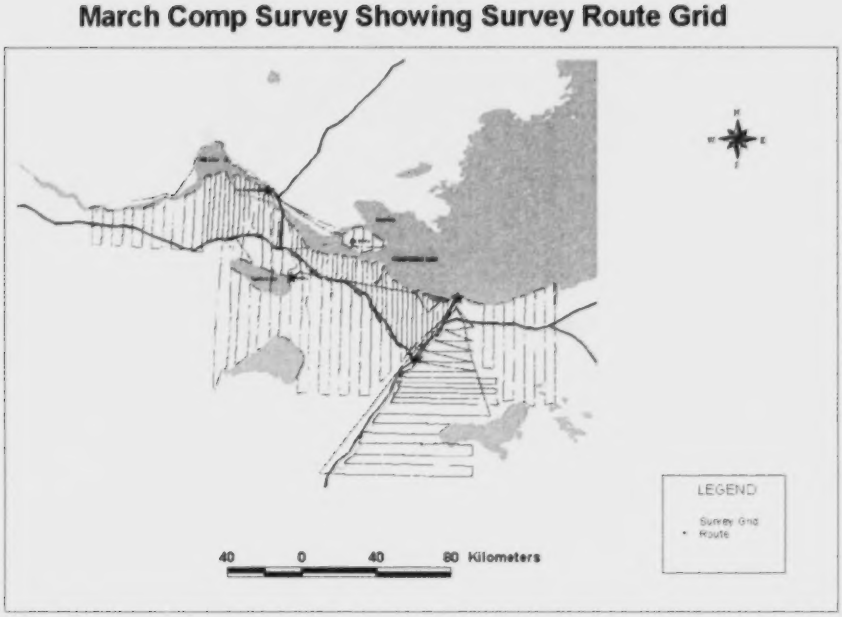



**Figure 6.4.** Flight lines and large mammals associated with wolf kills sighted during the March Comprehensive survey of the BCA, zones I and II, March 21 – 31, 2006.

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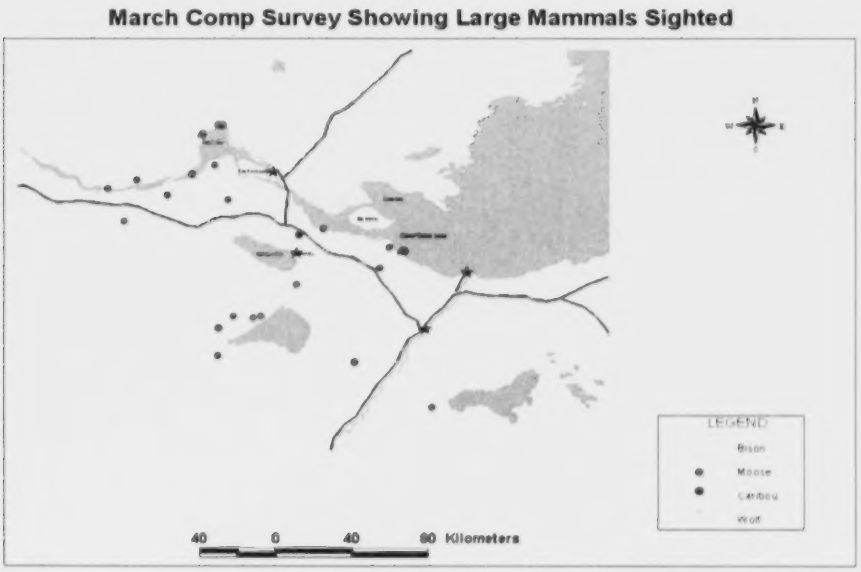


**Figure 6.2.** Large mammals observed during the March 21 – 31, 2006. Comprehensive survey of the Bison Control Area, Zones I & II.

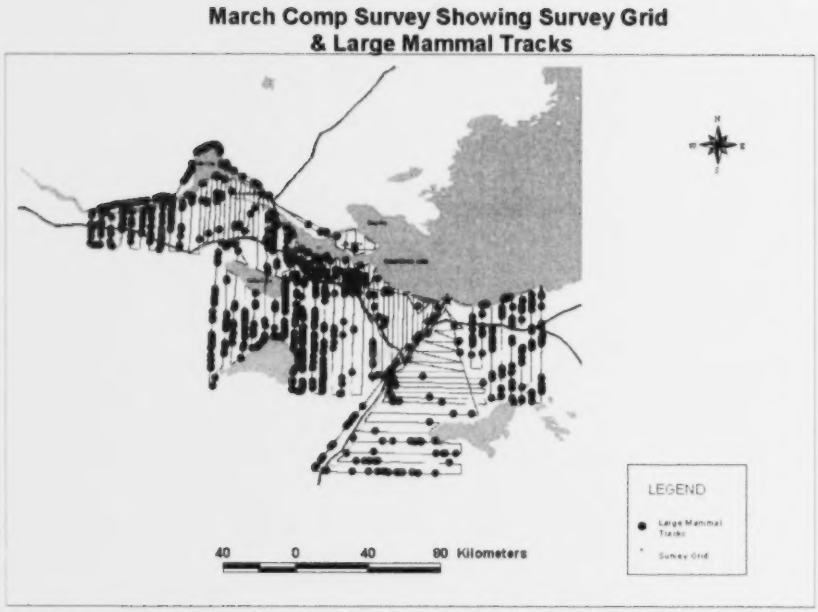


**Figure 6.3.** Flight lines and large mammal tracks recorded during the March Comprehensive Survey of BCA Zones I and II, March 21 – 31, 2006.

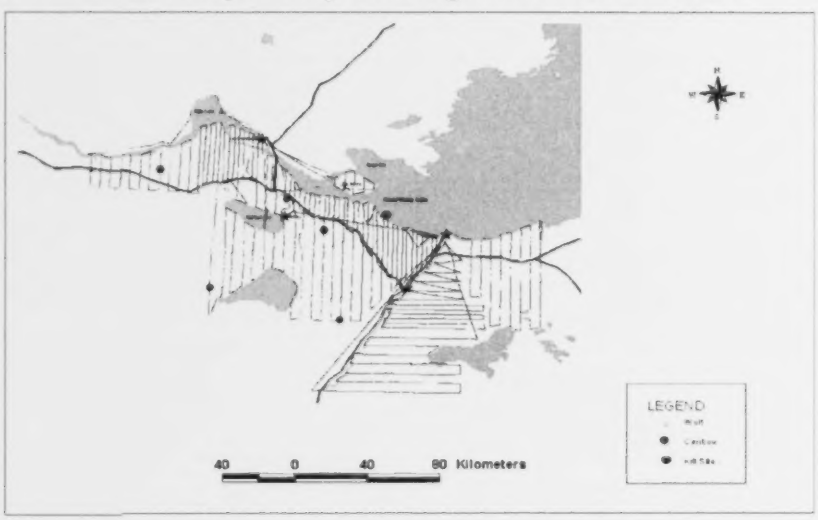


**Figure 6.4.** Flight lines and large mammals associated with wolf kills sighted during the March Comprehensive survey of the BCA, zones I and II, March 21 – 31, 2006.

## COMMUNICATIONS

The plan for public consultation in 2005/2006 included a combination of public meetings, posters, radio broadcasts, magazine displays and the completion of the BCA Website. A copy of the entire work plan is included in Appendix G, which includes the Media Plan. All contacts were initiated with a letter of introduction explaining the program and the role of the BCA technician.

Literature from previous years programs was reviewed at the beginning of the project and communities that had not been visited recently or at all were identified. Emphasis on holding public meetings was placed on those communities identified during the literature search. The BCA Technician began contacting all band and community offices at the start of the project. Only the Hay River Metis did not respond to telephone calls, letters or e-mails. A record of communication with all groups is included in Appendix F. The communities of Fort Resolution (April 5), Kakisa (April 18), Enterprise (May 4) and Trout Lake (May 10), held public information meetings and the response from most of the groups was very good. The Bison program was explained using a power point (Appendix E) presentation and discussion was promoted as well as comments from the groups were collected. (Appendix H) Attendance at public meetings ranged from 4 in Kakisa to over 30 at Fort Resolution. The high turn out in Fort Resolution was likely due to the Hook Lake Bison Ranch depopulation, which was being dealt with at this time.

The School was also briefly visited in Kakisa. It may be a good idea to visit more schools in future as the students are responsive and can take the message home. It may even be helpful to create a "classroom friendly" presentation of the BCA.

The BCA Technician also met with members of the WBNP Staff at the beginning of the program to inform them of the planned work and to solicit any advice concerning methodology and bison activity in the areas adjacent to the BCA.

The poster "IF YOU SEE A BISON" was distributed to the West Point First Nation, Hay River, K'atlodeeche First Nation, Hay River, Ka'a'gee Tu First Nation, Kakisa, Sambea' K'e Dene Band, Trout Lake, Enterprise Settlement Council, Enterprise, The Visitor Center, Enterprise and Winnie's Restaurant, Enterprise. A poster will be put at the NWT/Alberta Border at the first opportunity. Also the pamphlets "IF you See A Bison….", " Bison Of The Northwest Territories" and "Common Wildlife Deceases & Parasites in The Northwest Territories", were distributed to all the above groups.

A half page colour advertisement was included in the 2006 Explorers Guide, Page 89 (Appendix D). This advertisement was designed with the intent of reaching a wider audience; its aim was to inform the public about the Bison Control Program, its goals and to solicit public participation. It also was designed to reflect the present changes to the Department of Environment & Natural Resources and to facilitate easy access for public information.

A 30 second radio broadcast has been developed for broadcast during the off-season when the project is not operating. Plans are to run announcements on several different radio stations over the next four to eight weeks. This will be broadcast on CKLB, CJCD & CBC (Appendix C).

The BCA Website has been reviewed; links have been checked for accuracy and it is out for review by affected groups. Once this has been completed the website can be released. It should be shortly posted with the following web address:

http://www.nwtbisoncontrolarea.enr.gov.nt.ca .

# DISCUSSION

In the 2005 – 2006 surveillance season we did not observe bison or bison sign (i.e., tracks and/or feeding craters) in the BCA during weekly shoreline patrols, the semi-comprehensive and comprehensive surveillance surveys. However, the occurrence of bison crossing the river is important. Thus, absence of bison in the BCA should not be presumed, especially as there is a long period in the off-season when the program is not active and there is no snow to make tracks visible. It is important that these surveys remain ongoing to ensure that the BCA is maintained free of bison.

There were two occasions when we received reports of bison tracks crossing Great Slave Lake in the Des Roche Point area into the BCA. These proved difficult to investigate as the first report was communicated to us eight weeks after it was sighted. The second sighting was by a local Resource Officer (Antoine) in the same area but it received rain and snow prior to the investigation, all but obliterating the tracks.

The BCA Technician was hired after the shoreline patrols started so there was no opportunity to review best practices for completing shoreline surveys. Prior to the Semi Comprehensive and Comprehensive surveys the BCA technician relayed and distributed important information and instructions to all survey participants in order that each person was prepared and equipped by survey commencement. In all surveys we have strong confidence in the quality of data collected by the observers.

We extended survey coverage during the semi-comprehensive and comprehensive surveys further into the northwest corner of WBNP in the area north of Buffalo Lake and west of *ca.* longitude 114° 30' W. Although no bison were observed in this area, the addition of such coverage continues to improve our knowledge of areas along the northwest park border where bison would most likely disperse (Gates & Wierzchowski 2003). We also extended our flights to the meadow area south of Kakisa Lake, during the Semi-Comprehensive survey. Consideration should be given into extending survey routes into Alberta, west of WBNP, with respect to Hay-Zama herd movement. We suggest that survey effort for surveillance surveys in subsequent years continue to reflect the existing updated flight routes, as there are bison in the northwest park area /and there is good bison habitat in the vicinity of the Hay River near the NWT/Alberta border. This makes bison dispersal from the park and the Hay-Zama herd a distinct possibility.

This season we continued sampling quality and precision by utilizing a known strip (transect) width (500 metres) during surveillance surveys. Implementing a strip (transect) width enabled us to more or less accurately calculate percent cover prior to surveys. Considering the difficulty of maintaining the exact height above ground while flying, we ensured that we maintained the greatest possible coverage, given the available flying hours. This technique should continue, as it will enhance future surveillance surveys with heightened precision and increased methodical strength.

Public consultation and communication were expanded further this season, in an attempt to inform the public, thereby encouraging the report of any possible bison sightings.

- We should continue to hold meetings with community members in Zone III of the BCA, because there is currently no surveillance in this area. As we rely solely on reported public sightings to monitor this region, it is essential that we meet with community residents in order to obtain feedback.
- A visit to the schools was tried briefly and this should be continued further, as the message will go home to the parents and therefore out into the community. A Classroom friendly presentation similar to the BCA presentation now used for adult groups should be created.
- Telephone calls were made to all groups followed by a letter explaining the program and requesting an opportunity to meet. This worked well to contact the affected groups. Next year the meetings should take place a bit earlier as the fast progression of the 2006 spring has many people out on the land that would otherwise be able to attend the meetings.

Publishing information about the Bison Control Program in major newspapers of the Northwest Territories during summer months should be considered. This will maximize exposure to both residents and tourists.

All relevant BCA information pamphlets currently on display and in circulation should be inventoried and, if necessary, updated. It is recommended that

applicable band offices and tourist centres in the NWT be contacted to inquire whether supplies need replenishing. Any low stock should be re-ordered and replaced. The pamphlets "A field Guide to Common Wildlife Diseases in the Northwest Territories and "If You See A Bison" should be restocked.

Once it is activated, the Bison Control Area website should be maintained on a regular basis next season; This website should be updated whenever changes in program information or figures occur. It is imperative that website information be current and accurate, because it will be an effective medium for informing the public on a year round basis. Attempts should continue to be made to get responses from those shareholders who were asked to review and approve it.

Development of a database that stores location coordinates of probable areas of interest to bison (i.e. meadows, high density corridors, etc.) near standard surveillance routes should be considered next season. These locations may be selected in a number of ways by:

- conducting habitat analysis using satellite imagery based on vegetation types and proximity to diseased herds;
- locating areas based on results from studies such as Gates and Wierzchowski's landscape evaluation of bison movements and distribution (2003); and
- using compiled survey data to extrapolate potential areas of interest.

Creation of a Prospective Bison Habitat database would be beneficial to the BCA program in terms of aiding in future survey planning and increasing our knowledge of potential bison habitat around BCA.

As Radio broadcasts reach a wide group of people over a large area, a method of streamlining radio message implementation should be made. Radio broadcasts should continue.

- The local stations in Hay River and Yellowknife should be included as they reach a large demographic group.
- A method of internal movement to approve and distribute our broadcasts within E & NR, in a more timely way would aid in getting the message out.

## ACKNOWLEDGEMENTS

The BCA program for the 2005 - 2006 surveillance year was funded by ENR South Slave Region, Fort Smith, NT. and WBNP, Parks Canada Agency, Fort Smith, NT.

Several individuals played an important role in conducting the Bison Control Area Program during the 2005 - 2006 surveillance season. Shared Services personnel Gladys Schaeffer and Melissa Johns in Fort Smith handled administrative aspects such as staffing and pay records. Resource Officer Evelyn Krutko from Fort Providence assisted with logistics and shared their concerns and advice for on-going success of the Bison Control Program. We thank the community participants, as well as the West Point First Nation and the K'atlodeeche First Nation, who assisted in the surveillance flights; they are Lucas Elleze, Robert Sambelle, and of Fort Providence; and from Hay River, Arthur Martel, Napoleon Cayen and Leon Thomas. Thanks also go to aircraft pilots; Ivan Bourque from Reliance Airways, and Darcy and Taylor King from Landa Aviation Ltd. for their input and expertise during surveillance flights. Gratitude also goes out to E & NR's Wildlife Management Support Services, Data Coordinator, Doug Hartt, who assisted with the development and activation of the BCA website. Also, without the assistance of Officers Jerry Hordal and Ron Antoine in Hay River it would have been very difficult to complete both surveillance surveys.

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## APPENDIX A

Summary of weather conditions during shoreline patrols and surveillance flights throughout the Bison
Control Area Program surveillance season 2005-2006

Summary of weather data during shoreline patrols – BCA 2005/2006 surveillance season.

| Date | Patrol # | Zone | Temp | Winds | Sky | Light | Intensity | Snow Cover |
|---|---|---|---|---|---|---|---|---|
| 06-Jan-05 | 1 | I | -18 C | 10 kts – E | Overcast | Flat | Medium | Complete |
| 11-Jan-05 | 2 | I | -29 C | 5 kts – W | Clear | Bright | High | Complete |
| 20-Jan-05 | 3 | I | -29 C | 5 kts – W | Clear | Bright | High | Complete |
| 26-Jan-05 | 4 | I | -19 C | 7 kts – SE | Overcast | Flat | Medium | Complete |
| 02-Feb-05 | 5 | I | -28 C | 4 Kts – NW | Broken | Bright | High | Complete |
| 16-Feb-05 | 6 | I | -20 C | 4 Kts – E | Overcast | Flat | Medium | Complete |
| 23-Feb-05 | 7 | I | -16 C | 3 Kts – E | Overcast | Flat | Low | Complete |
| 07-Mar-05 | 8 | I | -14 C | Calm | Overcast | Flat | Medium | Complete |
| 16-Mar-05 | 10 | I | -13 C | 3 Kts – E | Overcast | Flat | Medium | Complete |
| 31-Mar-05 | 11 | I | -2 C | 10 Kts – SE | Broken | Bright | High | Low veg showing |
| 14-Apr-05 | 12 | I | 4 C | 5 kts – NE | Clear | Bright | High | Low veg showing |

Summary of weather data during surveillance surveys – BCA 2004/05 surveillance season.

| Date | Survey | Zone | Temp | Winds | Sky | Light | Intensity | Snow Cover |
|---|---|---|---|---|---|---|---|---|
| 08-Feb-05 | Semi | I | -28 C | 5 Kts – SE | Clear | Bright | High | Complete |
| 09-Feb-05 | Semi | I | -9 C | 10 Kts – S | Overcast | Flat | Medium | Complete |
| 10-Feb-05 | Semi | I | -17 C | 5 Kts – SE | Overcast | Flat | Medium | Complete |
| 22-Mar-05 | Comp | I&II | -10 C | 10 Kts – N | Broken | Bright | High | Complete |
| 23-Mar-05 | Comp | I&II | -18 C | 5 Kts – SW | Clear | Bright | High | Complete |
| 24-Mar-05 | Comp | I&II | -10 C | 5 Kts – SE | Scattered | Bright | Medium | Complete |
| 25-Mar-05 | Comp | I&II | -10 C | 5 Kts – W | Clear | Bright | High | Complete |
| 26-Mar-05 | Comp | I&II | -10 C | 5 Kts – W | Scattered | Bright | Medium | Complete |

## APPENDIX B

Summary of surveillance activities and removals of bison from the Northwest Territories Bison Control Area Program (1988/89-2004/05).

| | Aerial surveillance | | | | | |
|---|---|---|---|---|---|---|
| Year | Shoreline Patrols | Semi-Comprehensive Surveys | Comprehensive Surveys | Total Hours | Snow-mobile Ground Patrols | Bison Removals |
| 1988 / 89 | 1 | | | | | |
| 1989 / 90 | 2 | | | | | |
| 1990 / 91 | 2 | | | | | |
| 1991 / 92 | | 7 | | | | |
| 1992 / 93 | | | 3 | | | 9[a] |
| 1993 / 94 | 14[b] | | 1 | | 23 | |
| 1994 / 95 | 10 (26)[c] | 6 (94) | 1 (34) | 153 | 33 | 2[d] |
| 1995 / 96 | 11 (35) | 3 (48) | 1 (41) | 123 | | 3[e] |
| 1996 / 97 | 21 (62) | 3 (45) | 1 (46) | 153 | | |
| 1997 / 98 | 14 (43) | 3 (46) | 1 (48) | 137 | | |
| 1998 / 99 | 14 (43) | 2 (30) | 1 (45) | 117 | | |
| 1999 / 00 | 14 (42) | 2 (28) | 1 (46) | 115 | | |
| 2000 / 01 | 13 (40) | 2 (30) | 1 (50) | 120 | | |
| 2001 / 02 | 14 (42) | 2 (29) | 1 (42) | 113 | | |
| 2002 / 03 | 11 (25) | 2 (22) | 1 (40) | 87 | | |
| 2003 / 04 | 13 (31) | 1 (11) | 1 (37) | 78 | | |
| 2004 / 05 | 12 (29) | 1 (14) | 1 (33) | 76 | | |
| 2005 / 06 | 11 (23) | 1 (14) | 1 (36) | 88 | | |

[a] 17 May 1992: 7 bulls shot near Point de Roche
31 May 1992: 1 bull shot near Point de Roche (no lymph nodes collected)
Serological testing for Brucella was negative for all 9 bulls, no lesions consistent with tuberculosis observed on gross pathology or histopathology.

[b] Four patrols covered the Hay River area and extended inland to the northwest park boundary.

[c] Numbers in brackets represent survey hours( rounded off to the nearest hour).

[d] 8 March 1995, 1 cow shot by hunter along south shore of Mackenzie River. Cow had likely been wounded by wolves. Blood serum and retropharyngeal lymph nodes collected.
13 October 1994, prior to the surveillance season beginning, 1 bison shot by hunter near the eastern boundary of the BCA. Blood and tissue samples collected but no evidence of brucellosis or tuberculosis.

[e] 19 March 1996: 3 cows killed by hunter on the south shore of Mackenzie River. Blood serum (n=2) and retropharyngeal lymph nodes (n=3) collected. No serological reactors to brucella, and lymphatic tissue normal on gross examination.

**APPENDIX C**

Public service announcement to be aired on; CBC Radio North May 25 and 26, CKLB May 18 –June 16 and CJCD 8 times on one weekend in June.

**Script:**

**Public Service Announcement**

**Bison populations in Wood Buffalo National Park and the adjacent Slave River Lowlands are infected with tuberculosis and brucellosis.**

**A buffer zone has been created to prevent contact between these diseased bison and the healthy bison in the Mackenzie and Nahanni ranges to the north.**

**The buffer zone lies south of the Mackenzie River to the Alberta border and between Trout River in the west and Buffalo River in the east.**

**All bison in the buffer zone are presumed to be disease carriers and must be removed for testing.**

**Motorists and hunters are requested to report any sightings of bison in the buffer zone to the nearest Environment and Natural Resource Office.**

**Resident hunters may shoot bison in this area at any time.**

**Hunters are required to report any kills as soon as possible.**

**Public participation is an important part of the bison control program.**

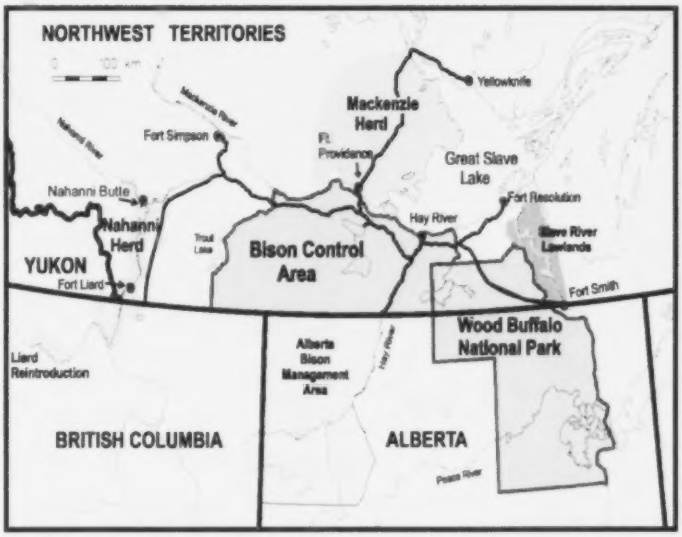
**Please report any sightings to your local Environment and Natural Resource Officer.**

## APPENDIX D

Half page colour article published in the 2003 Explorer's Guide & UP HERE magazine.

# *IF YOU SEE A BISON In the Control Area...*

*Bison populations in the Slave River Lowlands and the Wood Buffalo National Park area are infected with bovine tuberculosis and brucellosis. In 1987, the Bison Control Area (BCA) was created to prevent the spread of these diseases to the healthy Mackenzie and Nahanni herds. The BCA program is jointly funded by the Parks Canada Agency and the Government of the Northwest Territories.*




All bison in the BCA are presumed to be diseased and must be removed and tested.

In the Northwest Territories, two herds have been re-established and are disease-free. The Mackenzie herd numbers approximately 2000 animals, and represent the largest herd of healthy wood bison in Canada and a cornerstone in the nation's wood bison recovery program. The Nahanni herd now numbers about 350 animals.

Please report any bison sightings in the BCA as soon as possible to the nearest Environment and Natural Resources (ENR) office.

Under the Northwest Territories Wildlife regulations, a resident may at anytime, hunt bison within the BCA. A hunter who kills a bison in the BCA is required to report the incident as soon as practical.

*If you would like more information regarding the Bison Control Program*, please contact any ENR office.

PHONE : Hay River (867) 875-5550 Fort Providence (867) 699-3002 Fort Liard (867) 770-4311
Fort Smith (867) 872-6400 Fort Simpson (867) 695-7470

**APPENDIX D**

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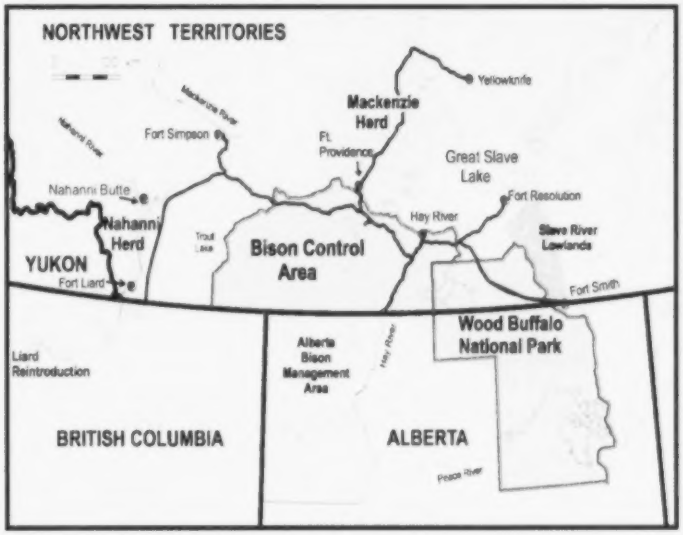


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## APPENDIX E

Slideshow presentation utilized during BCA community meetings (read left to right)

### NWT Bison Control Area

Community Meeting and Information Session

### Background History

- Wood Bison in and around Wood Buffalo National Park (WBNP) in the NWT are infected with tuberculosis and brucellosis due to the transplant of 6673 plains bison to the park between the years of 1925-1928
- : The Bison Control Area (BCA) was created to prevent the spread of tuberculosis and brucellosis from infected bison populations to healthy herds in the Mackenzie Bison Sanctuary and Nahanni region
- : The BCA program became co-funded by RWED and the Parks Canada Agency

Location of healthy free-roaming bison herds ( )
Location of free-roaming bison herds infected with tuberculosis and brucellosis ( )

### Tuberculosis and Brucellosis:

*What you should know*

- Causes of TB and Brucellosis
- Signs and symptoms of these diseases in bison
- Protecting yourself from exposure
- Reference Wildlife Diseases Web Page

http:... www.nwtwildlife.rwed.gov.nt.ca/Publications...diseases/index.htm

### Tuberculosis

**What causes TB?**

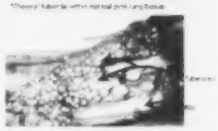
- TB is caused by a bacteria (Mycobacterium bovis)

**What are the signs of TB?**

- In bison, labored breathing, coughing, or discharge from nose or mouth
- Small, pale rounded lumps (tubercles) in the lungs or on the lining of the ribcage, or in other organs

**How can I protect myself?**

- Butcher the animal carefully and do not cut into infected parts
- Wash your hands, knives, and clothes with hot soapy water after handling the animal



### Brucellosis

**What causes Brucellosis?**

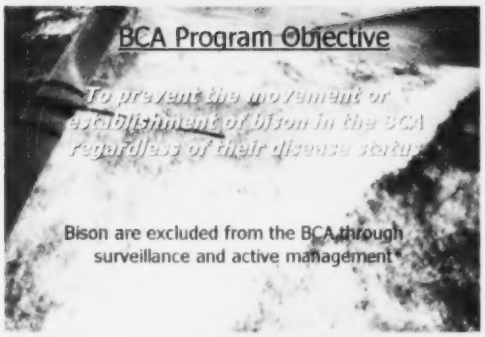
- In bison, brucellosis is caused by a bacteria (Brucella abortus)

**What are the signs of Brucellosis?**

- Swollen leg joints causing limping or lameness
- Swollen womb in female bison
- Pus-filled swellings under the skin, in the meat or in the internal organs

**What can I do to Protect Myself?**

- Do not cut into diseased parts
- Do not spill fluid from the womb onto the meat
- Wash your hands, knives and clothes with hot soapy water after handling the animal


BCA Program Objective
To prevent the movement or establishment of bison in the BCA regardless of their disease status
Bison are excluded from the BCA through surveillance and active management

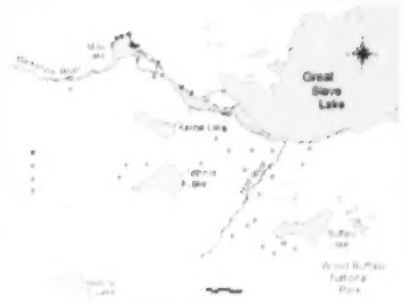
BCA Stratification Zones: Total Area 39, 363 km²

## Zone 1

- Range: Extends from Axe Point on the south shore of the Mackenzie in the west to Little Buffalo River In the east
- Degree of monitoring: Weekly Shoreline flights, Semi-Comprehensive & Comprehensive Survey
- High Risk: Bison groups consistently use habitat along the north shore of the Mackenzie River

## Zone 2

- Range: Covers more southern areas down to the border that include Kakisa and Tathlina Lake
- Degree of Monitoring: Semi-Comprehensive Survey once or twice per season and Comprehensive Survey once per season
- Moderate Risk




Comprehensive Survey Route

## Zone 3

- Range: Extends from Trout Lake to near the western edge of Tathlina and down to where the west shore of Hay River intersects the border
- Degree of Monitoring: Monitored through the general public and area residents.The program includes a comprehensive public awareness component that solicits reports of any bison sighted
- Low Risk: No aerial surveillance

## Verification Patrols

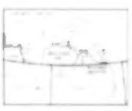
- Follow up reported sightings in the BCA
- How we get to sighting locations: access and situation dependent

## Harvesting Bison in the BCA

- Resident hunters may shoot bison in the control area at any time, but are required to report kills to nearest RWED office as soon as possible

## Public Awareness Program

- Various media are used to inform and educate the public about the BCA program:
  Radio, TV, Internet and other promotional material
- Community meetings and information sessions also provide important feedback

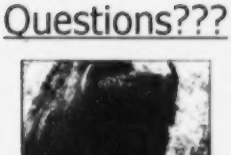


## Facts

- Tuberculosis and Brucellosis are of cattle origin
- Wood bison are considered a threatened subspecies of North American Bison by the committee on the Status of Endangered wildlife in Canada (COSEWIC)
- The Mackenzie Bison herd is only 100km away from WBNP and due to a bison's tendency to roam, it is very likely that contact could occur
- In 1993-May 17th: 8 bison shot near Point de Roche
- In 1995-March 7th: 1 cow was tracked and shot by Providence hunters
- In 1996-March 19th: 3 cows killed by a Fort Providence hunter.

*All animals tested negative for TB and Brucellosis

## Questions???



Thanks for coming out and remember to *report any bison sightings to your nearest RWED office*

## Appendix F

### Record of Communication to Groups

| Organization | Date | Description of Correspondence |
|---|---|---|
| **Deh Gah Got'ie Dene Council**<br>**Fort Providence** | 11-Jan-06<br><br>19-Jan-06 | - Called, left msg with secretary as both out will call back Thurs or Friday.<br>- **Cc'd letter** written to Darren Campbell including Attachments of Poster & Brochure. |
| **Fort Providence Metis Council – Local 57** | 10-Jan-06<br>13-Jan-06<br><br><br>16-Jan-06<br><br>19-Jan-06 | - Called left message and phone #<br>- Talked to Albert Lafferty re proposed meetings and possible observers.<br>- He suggests I contact the FPRMB and gave me Darren Campbell's name.<br>- Rec'd e-mail from Albert re above & answered email, correspondence on file.<br>- **Cc'd letter** written to Darren Campbell including Attachments of Poster & Brochure. |
| **Fort Providence Resource Management Board**<br>**Fort Providence** | 16-Jan-06<br>17-Jan-06 | - Attempted to contact Darren Campbell.<br>- Attempted to call Darren Campbell, no answer.<br>- Contacted Darren Campbell, Discussed the possibility of a meeting and will **send a letter snail mail w info**<br>- **Letter sent to Darren Campbell** w cc to Dene Council & Metis Local including attachments of Poster & Brochure. |
| **Tthedzeh K'edeli First Nation**<br>**Jean Marie River** | 11-Jan-06 | - Talked to Jennifer Kraus as Band Mgr Tammy Neil was on the phone will call back, left # got e-mail address.<br>- |

| | | |
|---|---|---|
| **KA'A'GEE TU FIRST NATION Kakisa** | 10-Jan-06 | - Talked to secretary and got email address, Will call tomorrow Am to discuss program with the Chief Loyd Chicot. |
| | 11-Jan-06 | - Called , left Msg will call back (3) asked to have |
| | 11-Jan-06 | Loyd call back |
| | | - Talked to Loyd & explained a bit of the program suggesting that we should perhaps have an exchange of information meeting. |
| | | - Will **send e-mail** suggesting dates. |
| | | - **e-mail** w attachments sent. |
| | 19-Jan-06 | - Hard copy of letter sent with pamphlets and poster sent snail-mail. |
| | 7-Mar-06 | - Called to discuss meeting possibilities with Loyd Chicot, he is out for the rest of the week, Asked for Ruby Landry and will **call her this PM**. |
| | | - Called Ruby Landry, she does not know Loyd's schedule and suggested I call him in FS as he is at the leadership meeting. |
| | 16-Mar-06 | - Call from Loyd sent the wrong posters, sent proper posters for the April 18th meeting this date. |
| | 13-April-06 | - Checked with Kakisa to confirm meeting Tuesday. All is a go. |
| | 18-April-06 | - Met with Chief & Councilor - 3 present. |
| **Sambea' K'e Dene Band Trout Lake** | 10-Jan-06 | - Talked to Ruby Jumbo and explained the program, Got her email and the Chief's e-mail – Chief Dennis Deneron. |
| | | - Will be **sending a letter** proposing a meeting. |
| | 17-Jan-06 | - **Letter sent by e-mail** to Ruby cc to Chief with attachments, Poster and Pamphlet |
| | | - **Follow up by snail-mail.** |
| | 18-Jan-06 | - Cc did not go to Chief, resending letter only. |
| | 16-Mar-06 | - Talked to Ruby Jumbo, Plan for the 26th of April at 7:00 in the Sambea Ke' Community Hall. Will send letters & posters for those dates. |
| | 13-April-06 | - Called to Change dates to the next week if Possible. Talked to Rebecca. |
| | | - Talked to Ruby , Agreed to change dates to |
| | 20-April-06 | Wednesday May 10, 2006. Sending new Posters. |
| | | - New posters mailed out. |
| | 08-May-06 | - Confirmed meeting, Chief & Ruby will be out but other hunters will be there. |
| | 10-May-06 | - Met with 3 people at Trout Lake and several others around town. Apparently the rest were out on the land. |
| **West Point First Nation Hay River** | 10-Jan-06 | - Talked to CEO Wendy Cayen about possible observers and the possibility of a meeting. Chief is Karen Falker and got e-mail address. Will **follow up with an e-mail** re this conversation. |
| | | - Will send a letter re meeting once we can come up with some dates. |
| | 16-Jan-06 | - Called the band and they gave me Tyler Cayen' name. |
| | 20-Jan-06 | - **E-mail** to Wendy Cayen re meetings & dates. |
| | | - Talked to Tylor Cayen about observer for the |

| | | |
|---|---|---|
| | | surveys. |
| | 24-Jan-06 | - Will fax a Casual Employment form to Wendy Cayen. |
| | 13-Feb-06 | - Talked to Wendy will fax all the info to her and they will send it back. |
| | 8-Mar-06 | - Asked if a fax could be sent to Leon Thomas re casual observer – ok'd |
| | | - Called to have Tylor Cayen return Casual Hire Form. |
| | 9-Mar-06 | - Called Wendy Cayen and stated that since Tylor has not returned the casual hire form, is there anyone else. |
| | | - Wendy said she would look. |
| | | - Called Wendy back and she gave me Joe Cayen's name. I asked to have him call. |
| | | - Joseph Cayen called, explained the job and then faxed Casual hire form to the band to have him fill out. |
| **K'atlodeeche First Nation Hay River** | 10-Jan-06 | - Talked to the secretary Jennifer, The CEO is Simon Wakwin and the chief is Roy Fabian. |
| | | - Will call back tomorrow PM, need e-mails of the principals. |
| | 11-Jan-06 | - Talked to Simon Wakwin will **send e-mail and** outlining our requirements for an observe and also some suggestions for meeting dates etc. |
| | 19-Jan-06 | - **E-mail sent** to Simon Wakwin including copies of the posters, pamphlet & letter. |
| | 13-Feb-06 | - Talked to April Martel re meeting this week. Mentioned Elders Meeting Feb 20, 06. Will get Jennifer to call back. |
| | 7-Mar-06 | - Called Simon Wakwin, re another observer, he is out this am will call this pm. |
| | 8-Mar-06 | - Called Simon back, he gave me Arthur Martel's name, I asked him to have Martin Call. |
| | 10-Mar-06 | - Simon Wakwin called, talked to Arthur, questioned and filled out form after explaining the job. |
| | | - Faxed Casual Employment form to Simon to have Arthur sign and fill out. |
| **Hay River Metis Nation Hay River** | | - Unable to contact , no telephone calls answered. |
| | | - Will attempt to visit when in Hay River. |
| **Enterprise Settlement Council Enterprise** | 7-Mar-06 | - Talked to Vivian with the settlement office. She suggests that the council meeting would be a good time. Will write letter and call Winnie Cadeaux the mayor. |
| | 4-April-06 | - Sent out information package and suggested dates. |
| | 13-April-06 | - Fax from Enterprise Changing the meeting times. |
| | | - Contacted Steve Olivier SAO to set up a meeting |
| | 20-April-06 | for May 4/06 at 7 pm. |
| | 04-May-06 | - New posters with meeting change sent out. |
| | | - Met with Community 7:00 pm – 6 present |
| **Fort Resolution Metis Council Fort Resolution** | 20-Jan-06 | - Called but no answer will try later. |
| | | - Letter faxed to Trudy King re meeting. |

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| | 8-Mar-06 | - Letter sent Snail mail to Loyd Cardinal.<br>- Talked to Trudy King re public meeting April 5th. She informs me that Loyd Cardinal is in Smith. Told her I would send out an information package about the public meeting.<br>- Letter with posters sent this date. |
| **Deninoo Community Council Fort Resolution** | 20-Jan-06<br><br><br><br><br><br><br>25-Jan-06<br><br><br><br><br><br><br><br>30-Jan-06<br><br>7-Mar-06<br><br><br><br>8-Mar-06<br>3-April-06 | - Talked to Tausia Lau, SAO she suggests that this would be possible can do it anyway we want, municipal meeting, Bands , Public Forum.<br>- Will send an e-mail once we have talked to the other groups.<br>- Talked to Tausia re public meeting. She thinks that next week is too soon that we should arrange a meeting through the three groups & they will draw the membership out for a public meeting at the community hall. The internet is down. I will write all three groups suggesting a time, date & place. (might be a good idea to talk to the other groups again and run the dates by Tausia)<br>- Letter sent as above suggesting the week of March 13.<br>- Talked to Tausia Lau, will plan an evening meeting for Mar 14, send poster.<br>- Called Tausia back, discussed the idea of changing the meeting to April 4 or 5, will send letter confirming this with a poster to announce the meeting.<br>- Letter sent out this date.<br>- Called Tausia to confirm the meeting for Wed Night. She sounded a bit doubtful but indicated that as long as the posters are up it should work. I told her that I had sent the Posters to her and that I would come wed pm and stop in and see her. |
| **Deninu K'ue First Nation Fort Resolution** | 23-Jan-06<br>24-Jan-06<br><br>30 –Jan-06<br><br><br><br>30-Jan-06<br><br>7-Mar-06<br><br><br>8-Mar-06 | - Called left Message on answering machine.<br>- Talked to Ruth she will get the SAO Irvin Norin to call.<br>- Talked to Morris, then Ruth and then the Chief Robert Sayine, explained the program and committed to writing a letter & will include information and suggest dates.<br>- Letter sent outlining poss. dates Mar 30.<br>- Talked to Irvin Norin re meeting March 14 but he does not want to do it then Suggested April 3-7.<br>- Told Irvin I would send a letter to confirm dates and poster to announce the meeting.<br>- Letter with posters sent to Irvin Norin. |

**Appendix G**

## BCA General Work Plan & Communications Plan

| WEEKLY PERIOD | WORK PLAN | COMMUNICATIONS PLAN |
|---|---|---|
| **JANUARY 12 & 13** | - Familiarization with last years program complete. **C**<br>- Minor literature review complete.<br>- Familiarization with Parks/GNWT MOU complete. **C**<br>- Shoreline patrol and entries. **C**<br>- Communications Plan Complete. **C**<br>- Initial contacts with bands and community groups**C**<br>- Time sheets for self & other<br>- casual. **C**<br>- Tender request for Cessna 185 type, semi- comprehensive & comprehensive surveys. **C**<br>- E-mail account established. **C** | - Initial contacts to Communities/bands with emphasis on those not visited for several years. **C**<br>- Up date Community/band telephone & address list. **C** |
| **JANUARY 16 – 20** | - Walk through 'Pathfinder', 'Aspen', and GPS systems. **C**<br>- Review Casual employee list made in previous years and scope out with community groups. **C**<br>- Contact possible as-&-when casuals and complete paper work in advance. **C**<br>- Test run for field Pathfinder & Aspen on Lap-top in field. **C**<br>- Initiate Communications Plan. **C**<br>- Shoreline patrol and data entry. **C**<br>- Review GIS mapping. **Ongoing**<br>- Reconstruct Maps from last year GIS and load. **C**<br>- Enter Shoreline data on GIS. **C** | - Follow up letters to communities contacted to arrange meetings. **C**<br>- Follow up with Doug Hartt re BCA Web Site. **Ongoing**<br>- Place add with CBC Radio and CJCD. Run weekly. CKLB **IP**<br>- Liaise with Parks Canada and receive any input they may have.<br>- Posters mounted & ready for establishing in the Communities. (Enterprise, YFR, YHY, Kakisa, Providence & Trout Lake.)**C**<br>- Continuing with initial contact to community groups. **C** |
| **JANUARY 23 – 27** | - Continue checking waypoints for GPS. **IP**<br>- Shoreline patrol & data entry **C**<br>- Map Shoreline patrol sightings. **C**<br>- Continue reconstruct maps as required. **C**<br>- Check for errors. **IP**<br>- Enter time sheets as required. **C**<br>- Tenders close A/C Contractor selected. **C** | - Continue contacts with other communities. **C**<br>- Follow up with other public/Media issues as required. **Ongoing**<br>- Complete Radio adds and expedite - **RM** |
| **JANUARY 30 TO FEBRUARY 3** | - Request for bids reported & complete. **C**<br>- Fort Resolution for HLWBRP. **N/A** | - Meet with Deninoo, Deninu K'ue & Fort Resolution Metis. **C**<br>- At least one poster for community. **C** |

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| | - Shoreline patrol & data entry. **C**<br>- Continue to reconstruct maps<br>- Plan survey for next week, check waypoints and logistics. **C**<br>- Hire casual workers if required. **C** | - Distribute pamphlets & Brochures. **C**<br>- Continue contacts with other communities **C** |
| **FEBRUARY 6 - 10** | - Semi-Comprehensive survey. **C**<br>- Complete time sheets for casuals. **C**<br>- Begin data collection & compilation from survey. **C**<br>- Error checks. **C**<br>- Map construction begins. **C**<br>- Address other issues as they arise | - Meet with Fort Providence Metis Council, Deh Gah Got'ie Dene Council & Fort Providence Resource Management Board. **Not Done**<br>- Follow up with other public/Media issues as required. **C**<br>- Meet with Kakisa **C** |
| **FEBRUARY 13 - 17** | - Data compilation, error checks and mapping continues for semi-comprehensive survey. **C**<br>- Shoreline patrol data entry & mapping. **C**<br>- Complete entry for the final report. **C**<br>- Address other issues as they arise | - Contacts with Enterprise & Hay River groups to arrange possible meetings. **C**<br>- Follow up with other public/Media issues as required. **C** |
| **FEBRUARY 20 – 24** | - Bart Off on course. **C**<br>- Shoreline patrol **C**<br>- Time sheet complete for casuals. **C** | |
| **FEBRUARY 27 TO MARCH 3** | - Bart off on course. **C**<br>- Shoreline patrol. **C** | |
| **MARCH 6 – 10** | - Data entries from shoreline patrols Feb 20 – Mar 3.**C**<br>- Complete Semi Comprehension documentation as required. **C**<br>- Shoreline patrol, data entry & mapping. **C**<br>- Address other issues as they arise | - Firm up meetings with Enterprise & Hay River groups. **HY not Done Enterprise Complete**<br>- One overnight Trip to Hay River and Enterprise maybe more depending upon groups. **C** |
| **MARCH13 -17** | - Prepare for Comprehensive survey. **C**<br>- Logistics for Comprehensive survey **C**<br>- Shoreline patrol, data entries & mapping. **C**<br>- Time sheets for casuals in. **C**<br>- Address other issues as they arise | |
| **MARCH 20 - 24** | - Comprehensive survey. **C** | - |
| **MARCH 27 - 31** | - continue comprehensive survey as required. **C**<br>- Shoreline Patrol, data entry & Mapping. **C**<br>- Start Comprehensive survey data entry, mapping & manipulation. **C** | - Follow up with other public/Media issues as required. **C** |

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| | - Address other issues as they arise | |
| **APRIL 3 – 7** | - Data and mapping entries continues for comprehensive survey. **C**<br>- Complete first draft of final report.<br>- Shoreline patrol, data entry & mapping. **C**<br>- Casual time sheets entered. **C**<br>- Possible short term contract for Shoreline flying. **N/A**<br>- Address other issues as they arise. | - Follow up with other public/Media issues as required. **C**<br>- Fort Resolution Meeting **C** |
| **APRIL 10 - 14** | - Possible Shoreline Patrol. **C**<br>- Data entry & Mapping.<br>- Final Report writing.<br>- Follow up on Feb 13 sighting. **C**<br>- Address other issues as they arise | - Follow up with other public/Media issues as required. Web-site & Radio. |
| **APRIL 17 - 21** | - Possible Shoreline Patrol **N/A**<br>- Data entry & Mapping. **C**<br>- Final Report writing.1st draft complete<br>- Casual time sheets entered **C**<br>- Address other issues as they arise. | - Follow up with other public/Media issues as required. |
| **APRIL 24 – 28** | - Possible Shoreline Patrol. **N/A**<br>- Data entry & Mapping. **C**<br>- Final Report writing.<br>- Address other issues as they arise | - Follow up with other public/Media issues as required.<br>- Visit Trout lake Wx & A/C hours permitting. **C** |
| **MAY 1 – 5** | - Data entry & Mapping. **C**<br>- Final Report writing.<br>- Casual time sheets entered **C**<br>- Address other issues as they arise | - Follow up with other public/Media issues as required.**C** |
| **MAY 8 – 12** | - Data entry & Mapping. **C**<br>- Final Report writing **C**<br>- Address other issues as they arise | - Follow up with other public/Media issues as required. **Radio/Website** |
| **MAY 15 - 19** | - Data entry & Mapping. **C**<br>- Casual time sheets entered<br>- Final Report complete | - Follow up with other public/Media issues as required. **Radio/Website** |
| **MAY 23 - 29** | - Final First Draft Reviewed | - |

**C** **ITEM COMPLETE.**
**IP** **IN PROCESS**

## APPENDIX H

Comments From Community Meetings

### Fort Resolution — Wednesday April 5, 2006.

- The signs on the highway should be in the several aboriginal dialects used in the South Slave.
- Could use signs along the Mackenzie, Hay River and Little Buffalo Rivers where appropriate.
- Will infected bison left on the land infect other animals such as carnivores.
- The first infected Bison was left a week on the land, but why was it left that long before disposal.
- How do we know what the wolves ( and other carnivores) might be doing to spread the disease.
- As the Mackenzie Bison herd increases and moves into area closer to Yellowknife, is it possible for them to become infected with TB from infected caribou in around Yellowknife.

### Kakisa Ka'a'gee Tu First Nation — Tuesday April 18, 2006.

- Pasture is not available in the immediate vicinity of Kakisa.
- The alleged sighting of bison tracks last year was probably not bison.
- Much of the area to the south of Kakisa and Hay River has been burned out which makes poor pasture for bison
- There is better pasture up in the hills for bison.
- Kakisa has been assembling information on traditional trails which may give rise too more information on other wildlife movements.
- The bison from the Mackenzie herd appear to be pushing moose out of the Horn River area.
- There appears to be over killing of caribou in some areas, but this is mostly third hand information.
- Fishing and resulting waste appears to bringing in the wolves. This may also affect the caribou.
- Buffalo have been seen within 20 km of Yellowknife.

### Enterprise — Thursday May 4, 2006

- What are the numbers of wild bison in Western Canada?
- No bison are expected to be seen in this area.
- Where are the Moose located.

### Trout Lake Sambaa ' Ke — Wednesday may 10, 2006.

- The Elders in old times where aware of disease in animals and did use animals killed with disease in them.
- Many animals do not seem to be where they once were.
- Concerns about the pipeline activities.
- No bison have been seen near Trout Lake.